LIGHTING EQUIPMENT

with Engineered Illumination

for COMMERCIAL APPLICATIONS

THE ART METAL COMPANY
CLEVELAND, OHIO

CATALOG C142
WITH ILLUMINATION DESIGN DATA
A. I. A. FILE 31F2

SYNOPSIS

● Fundamentals of illumination have advanced through the intensive research of the Science of Seeing. At no time has engineered illumination encompassed so broad a field.

The first and foremost question in the selection of an engineered lighting system becomes the objective to be accomplished. The second question concerns the engineering method and technique to be employed to fulfill the basic purpose.

A critical evaluation of any lighting system should give consideration to the following essentials: quality (kind and type of illumination), quantity (amount of illumination), and esthetic appeal.

Lighting design and specification deals not only with new construction projects, but even to a greater extent, is concerned with improvement of existing systems to make them more effective.

This catalog illustrates types of lighting equipment for all commercial interiors. These types are Direct, Indirect, Semi-Indirect, Direct-Indirect, Controlled Down Lighting and Fluorescent Lighting. The technical information, such as candlepower distribution curves and the coefficients of utilization for certain equipment, is given, for the scientific approach to lighting design problems. The Illumination Design Data embraces the Lumen Method and the Point-by-Point Method of calculation. Supplementing the latter is a table for footcandle values on a horizontal plane.

The salient features of Art Metal products are engineered illumination design, refined styling and sturdy construction.

THE ART METAL COMPANY, CLEVELAND, OHIO

Printed in U. S. A.

Art Metal Engineered Lighting Equipment Provides Adequate Seeing Conditions

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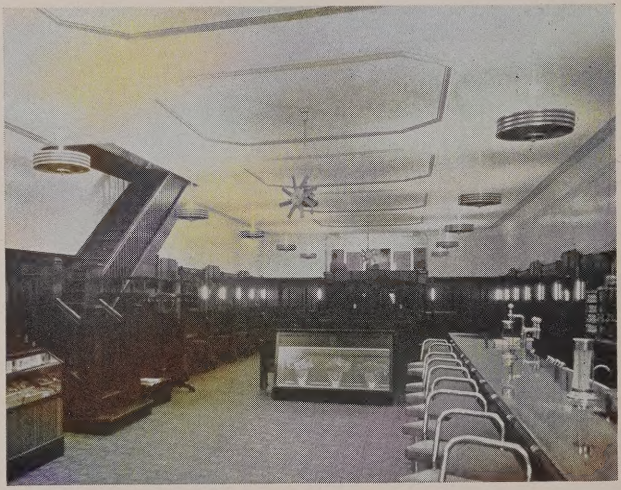

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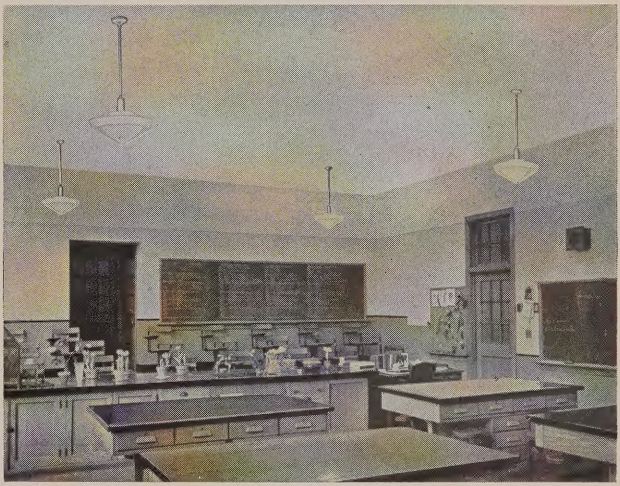

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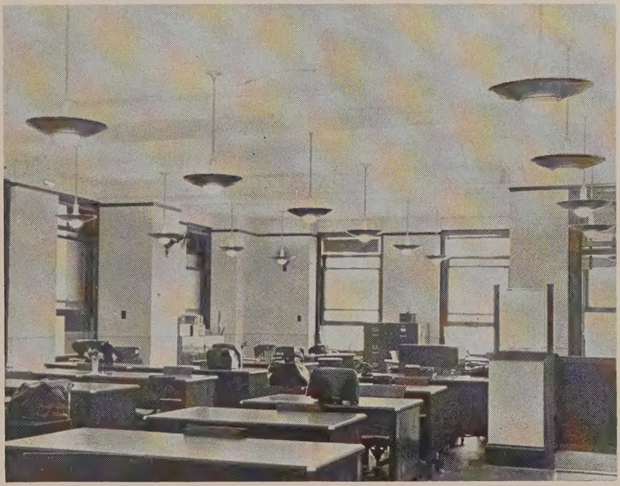

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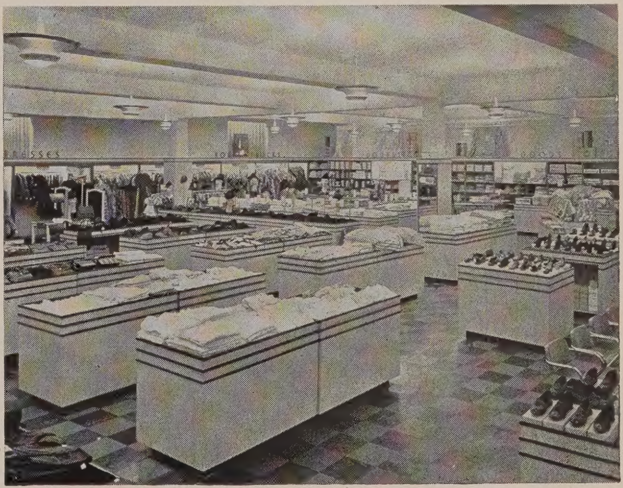

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ILLUMINATING ENGINEERING NOMENCLATURE

Approved as American Standard by the American Standards Association, prepared under the direction of and issued by THE ILLUMINATING ENGINEERING SOCIETY.

LIGHT: For the purposes of Illuminating Engineering, light is radiant energy evaluated according to its capacity to produce visual sensation.

LUMINOUS FLUX: Luminous Flux is the time rate of flow of light.

LUMEN: The Lumen is the unit of luminous flux. It is equal to the flux through a unit solid angle (steradian) from a uniform point source of one candle, or to the flux on a unit surface all points of which are at a unit distance from a uniform point source of one candle.

LUMINOUS INTENSITY: Luminous intensity, of a source of light, in a given direction, is the solid—angular flux density in the direction in question. Hence, it is the luminous flux on a small surface normal to that direction, divided by the solid angle (in steradians) which the surface subtends at the source of light.

CANDLE: The candle is the unit of luminous intensity. The unit used in the United States is a specified fraction of the average horizontal candlepower of a group of 45 carbon-filament lamps preserved at the Bureau of Standards, when the lamps are operated at specified voltages. This unit is identical, within the limits of uncertainty of measurement, with the International Candle established in 1909 by agreement with the National Standardizing Laboratories of France, Great Britain, and the United States, and adopted in 1921 by the International Commission on Illumination.

CANDLEPOWER: Candlepower is luminous intensity expressed in candles.

ILLUMINATION: Illumination is a density of the luminous flux on a surface; it is the quotient of the flux by the area of the surface when the latter is uniformly illuminated.

FOOTCANDLE: The footcandle is the unit of illumination when the foot is taken as the unit of length. It is the illumination on a one square foot in area on which there is a uniformly distributed flux of one lumen, or the illumination produced at a surface all points of which are at a distance of one foot from a uniform point source of one candle.

BRIGHTNESS: Brightness is the quotient of the luminous intensity of a surface measured in a given direction by the area of this surface projected on a plane perpendicular to the direction considered.

UNITS OF BRIGHTNESS:

Candles Per Unit Area of Surface; the practice recognized internationally is to express brightness in candles per unit area of surface. The brightness of any surface, in a specified direction, can also be expressed in terms of the lumens per unit area from a perfectly diffusing surface of equal brightness.

Lambert: The Lambert is a unit of brightness equal to the uniform brightness of a perfectly diffusing surface emitting or reflecting light at the rate of one lumen per square centimeter.

Foot-Lambert: The foot-lambert is a unit of brightness equal to the average brightness of any surface emitting or reflecting light at the rate of one lumen per square foot, or the uniform brightness of a perfectly diffusing surface emitting or reflecting light at that rate.

Relationship of the Common Units of Brightness:

1 Candle per Square Inch = 452 foot-lamberts.
= .487 lamberts.
= 487 millilamberts.
1 Foot-Lambert = 1 lumen per square foot reflected or emitted.
= .00221 candles per square inch.
= 1.076 millilamberts.
1 Lambert = 1 lumen per square centimeter reflected or emitted.
= 1000 millilamberts.
= 929 foot-lamberts.
= 2.054 candles per square inch.
1 Millilambert = .929 foot-lamberts.
= .002054 candles per square inch.

The candle per square inch and lambert are commonly used for high brightness such as of light sources.

The foot-lambert and millilambert for ordinary illuminated surfaces.

The foot-lambert = incident footcandles x reflection factor, assuming a diffusing surface or medium.

BRIGHTNESS RATIO: Brightness ratio is the ratio of brightness of any two surfaces. When two surfaces are adjacent, the brightness ratio is commonly called the "brightness contrast."

COLOR TEMPERATURE: The color temperature of a source of radiant energy is the temperature at which a complete radiator must be operated to give a color matching that of the source in question.

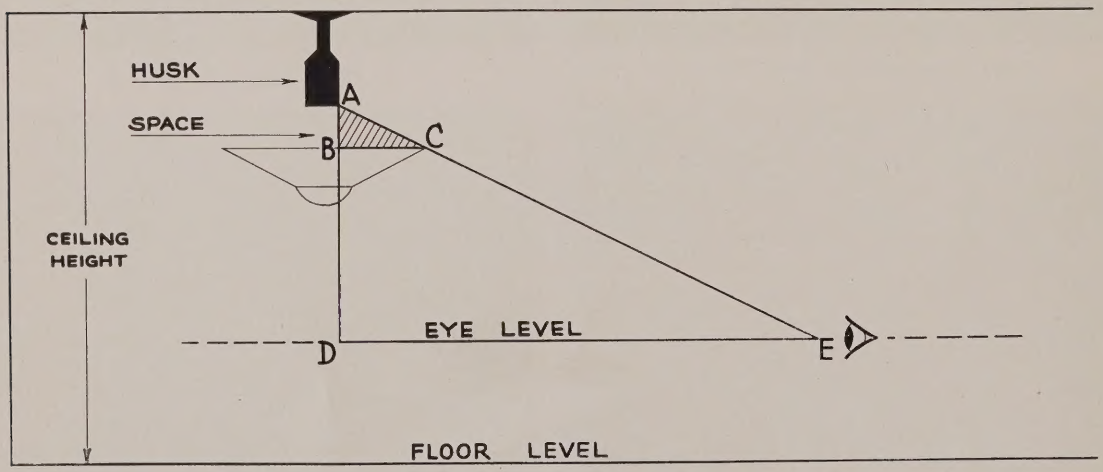
REFLECTION FACTOR: The reflection factor of a body is the ratio of the light reflected by the body to the incident light.

TRANSMISSION FACTOR: The transmission factor of a body is the ratio of the light transmitted by the body to the incident light.

ABSORPTION FACTOR: The absorption factor of a body is the ratio of the light transmitted by the body to the incident light.

COEFFICIENT OF UTILIZATION: Coefficient of Utilization of an illumination installation on a given plane is a total flux received by that plane divided by the total flux from the lamps illuminating it. When not otherwise specified, the plane of reference is assumed to be a horizontal plane 30 inches from the floor.

METHOD TO COMPUTE LAMP NECK CUT OFF



A simple means for determining the maximum distance an observer can be from an installed lighting fixture before the lamp neck can be seen (if the assembled fixture has a space between the Husk and Bowl), is a matter of geometrical proportion computed as follows:

AB is to BC as AD is to X (or the distance DE). The correct arithmetical equation is as follows:

$$AB : BC = AD : X$$
$$X = \frac{BC \text{x} AD}{AB}$$

1. The distance from the husk to the bowl is AB.
2. Measure on the diameter of the bowl from the center of the bowl to the outer edge, less one-half the husk diameter is the distance BC.
3. The distance vertically from the bottom of the husk to the observer's eye level is AD.
4. The maximum distance away the observer can get before seeing the lamp is obtained by working the proportion problem. Triangle ABC is directly proportioned to ADE.
5. The figures to replace the indicated letters in the equation are determined from actual measurements of the installation.

THE LUMEN METHOD FOR COMPUTING INTERIOR ILLUMINATION

Foot Candles Resulting from Art Metal Indirect, Semi-Indirect and Direct Indirect Fixtures Or the Lamp Size to Use in the Fixtures Are Quickly Arrived At By the Lumen Method for Computing Interior Illumination.

● Illumination values can be computed arithmetically by using correct factors in the equation. The factors given are determined from results of actual tests and furnished here for future use and reference. Those not given must be determined by the individual doing the job.

Two factors usually not known are:

(1) Size Lamp (Lamp Lumens) required per outlet for the installation.

(2) Footcandles resulting from an installation.

The equations for arriving at the above are as follows:

A. Lamp Lumens Required per Outlet =

$$\frac{\text{Footcandles} \times \text{Area in Sq. Ft. per Out.}}{\text{Coefficient of Util.} \times \text{Main. Factor.}}$$

B. Footcandles =

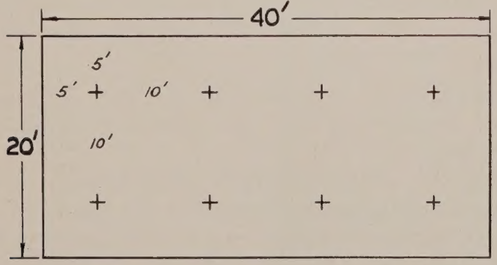
$$\frac{\text{Lamp Lumens} \times \text{Coef. of Util.} \times \text{Main. Factor.}}{\text{Area in Sq. Ft. per Outlet.}}$$

The following factors are necessary and appear in both equations. They will each be described in detail.

I. Area in Square feet per outlet.
II. Size Lamp, or, Lamp Lumens.
III. Coefficient of Utilization.
IV. Footcandles.
V. Maintenance Factor.

I. Area in Square Feet Per Outlet

The arrangement or layout of outlets determines the number of outlets in a room of a given size. Dividing this number into the sq. ft. area of the room determines the area per sq. ft. of each outlet. Assume a room 20 ft. wide by 40 ft. long, with two rows of outlets on ten foot centers, thus 20′ × 40′ ÷ 8 = 100 sq. ft. per outlet.



The following table is a reasonable guide for arriving quickly at spacings, areas and suspensions:

MOUNTING HEIGHTS AND SPACINGS

Ceiling Height	Spacing	Average Area Per Outlet	Suspension*
8	7	50–60	1–1½ Ft.
9	8	60–70	1–1½ Ft.
10	9	70–85	1–2½ Ft.
11	10	85–100	1½–2½ Ft.
12	10–12	100–150	2–3 Ft.
13	10–12	100–150	2–3 Ft.
14	10–13	100–170	2½–4 Ft.
15	10–13	100–170	3–4 Ft.
16	10–13	100–170	3–4 Ft.
18	10–20	100–400	3–4 Ft.
20 & up	18–24	300–500	4–6 Ft.

*When consulting a photometric analysis, if wide distribution is apparent revealing high candlepower in 135° to 155° zones, then 30″ suspension for total and semi-indirect fixtures in rooms of 10-12-14 ft. ceiling height to a max. of 14 ft. outlet spacing, will result in reasonably good uniformity.

II. Size Lamp or Lamp Lumens

This means the rated light output (lumen output) of the lamp and not its physical dimension. The lumen being a unit of measurement of quantity of light reveals to us that 5750 units of light are produced by a 300-watt P.S. 35 Mazda Mogul Base Lamp.

Various size lamps produce certain quantities of lumens . . . the correct lamp to produce the quantity of illumination must be determined. If only a certain size lamp can be used because of certain restrictions, then by applying its lumen output in the equation the footcandles resulting will be revealed.

TABLE OF LAMP LUMENS

		Lumens			Lumens
15 Watt	Mazda	I.F. — 150	300 Watt	Medium	I.F. — 5900
25 Watt	Mazda	I.F. — 270	500 Watt	Mogul	I.F. — 10000
40 Watt	Mazda	I.F. — 470	750 Watt	Mogul	I.F. — 14500
60 Watt	Mazda	I.F. — 830	1000 Watt	Mogul	I.F. — 21000
100 Watt	Mazda	I.F. — 1600	1000 Watt	Bipost	I.F. — 19500
150 Watt	Mazda	I.F. — 2600	1500 Watt	Mogul	I.F. — 33000
200 Watt	Mazda	I.F. — 3700	250 Watt	Mercury	— 7500
300 Watt	Mogul	I.F. — 5750	400 Watt	Mercury	— 16000

III. Coefficient of Utilization

This is the percentage of light emitted by the lamp that actually gets down to and is useful on the working level. To arrive at this, certain conditions must be taken into consideration.

Room Index: Variations in room proportions affect the use of light. To arrive at some basic figures the General Electric Company by a concerted effort experimented with an adjustable room over a long period of time arriving at the classifications indicated under the heading of Room Index. These have all been carefully and scientifically worked out to be used as tabulated.

Lighting Equipment Characteristics: Efficiency (fixture output in relation to lamp output) and distribution or control of light, are very important. The relation of these to the room proportions determines the amount of light delivered to the working plane. Coefficients of Utilization have been computed from Electrical Testing Laboratory curves of Art Metal fixtures to enable true and individual results.

Interior Finish: Ceilings and walls play an important part by returning to usefulness the light that is directed toward them from lighting fixtures. Our calculations have been made from ceiling reflection factors of 80-50-30 per cent, with walls of 50-30-10 per cent. This covers most conditions from very favorable to poor. Approximate reflection factors of walls and ceilings can be made effectively and easily with the little Light Meter. Place the cell of the Light Meter against the surface to be measured, draw it back slowly about two to four inches until a constant reading is obtained. Note this reading. Now turn the Meter around and place it against the surface with the cell facing away from the surface and take a second reading. Dividing the first reading by the second will give the approximate reflection factor of a diffusely reflecting surface. (Use identical lighting conditions during this test.) This procedure better qualifies a selection from the indicated tables than just a visual appraisal.

IV. Footcandles

In this era of advanced standards of living we have a very definitely low standard of seeing. Recommendations have been established in an effort to raise the levels of seeing illumination. We include a list of generally accepted recommendations for various seeing tasks which are offered merely as a guide of minimum values.

TABLE OF RECOMMENDED FOOTCANDLE VALUES

AUDITORIUMS	5
AUTOMOBILE SHOW-ROOMS	20
BANKS	
Lobby	10
Offices	20
BARBER SHOPS AND BEAUTY PARLORS	20
CHURCHES	
Auditoriums	5
Sunday School Rooms	10
Pulpit or Rostrum	15
CLUB AND LODGE ROOMS	
Lounge and Reading Rooms	20-50
Auditoriums	5
COURTROOMS	10
DRAFTING ROOMS	30-50
HOSPITALS	
Corridors	2
Laboratories	20
Lobby and Reception Room	5
Operating Room	20
Private Rooms and Wards	20
HOTELS	
Lobby	10
Dining Room	5
Kitchen	10
Guest Rooms	10
Corridors	2
Writing Rooms	20-50
LIBRARIES	
Reading Room	20-50
Stack Room	10
NIGHT CLUBS, BARS AND DANCE HALLS	5
OFFICE BUILDINGS	
Bookkeeping, Typing and Accounting	30
CONFERENCE ROOM	
General Meetings	10
Corridors and Stairways	5
DESK WORK	
Intermittent Reading and Writing	20
Studying, Designing, etc	30-50
Reading Blueprints and Plans	30
PROFESSIONAL OFFICES	
Waiting Room	10
Consultation Rooms	20
Operating Offices	20
SCHOOLS	
Auditoriums	10
Classrooms, Library and Offices	20
Corridors and Stairways	5
Drawing Rooms	30-50
Gymnasium (Basketball)	20
Laboratories	15
Manual Training	20
Study Rooms—Desks and Blackboards	20
STORES	
Light Merchandise	20
Dark Merchandise	50-100

V. Maintenance Factor

Inasmuch as there is no such thing as man-made permanence, any man-made object will depreciate, dirt being the enemy of efficiency. Lighting is no exception to this, especially when lack of fixture maintenance is so in evidence. In computing for Illumination values this depreciation of lamps, fixtures, reflecting surfaces, etc., must be allowed for so that desired footcandle levels may be maintained in service as contrasted to initial values. The illumination, maintained in service under average conditions, will be about 70% of the initial value or .70 when expressed as a maintenance factor. If conditions are above average this value may be higher, or conditions may be the reverse making this value lower. Consideration has been given these conditions in the following tabulations.

PROCEDURE FOR COMPUTING ILLUMINATION VALUES

The essential parts of the equation have been briefly discussed with enough informative data to allow for an understanding of the factors of the equation. To illustrate the use of this follow the working of a typical example.

> "The room to be lighted is a school classroom, 20 ft. wide, 40 ft. long. Two rows of fixtures on 10 ft. centers. The ceiling is 12 ft. high. Ceiling paint, flat white good clean condition . . . sidewalls, light buff good clean condition. 25 footcandles are required. What size lamps per outlet are needed to do the job? The Plasticlite No. 1860 has been selected as the type unit."

The equation for this problem—

$$\text{Lamp Lumens} = \frac{\text{Footcandles} \times \text{Area in Sq. Ft. per Outlet.}}{\text{Coefficient of Utilization} \times \text{Maintenance Factor.}}$$

Step No. 1—Footcandles have been determined at 25. Area in Sq. Ft. per Outlet = 800 Sq. Ft. ÷ 8 Outlets or 100 Sq. Ft. per Outlet.

Step No. 2—Coefficient of Utilization. From room index table refer to column under 12 ft. ceiling height in semi-indirect band, move down to 20 ft. room width space and in the row indicated by heavy type for 30 to 42 ft. room length, find letter "E". Now refer to next table calculated specifically for the 1860 Plasticlite fixture. Under room index find E, having determined paint conditions as very favorable using the 80% ceiling reflection factor and 50% wall reflection factor, move down this column to E and find .39—this is the Coefficient of Utilization.

Step No. 3—Maintenance Factor . . . Average determined for this particular fixture is .65.

Step No. 4—Equation now stands ready for computing viz.:

$$\text{Lamp Lumens (?)} = \frac{\text{Footcandles (25)} \times \text{Area in Sq. Ft. per Outlet (100)}}{\text{Coef. of Util. (.39)} \times \text{Main. Fac.(.65)}}$$

$$= \frac{2500}{.2535} = 9861 \text{ lumens.}$$

A 500-watt I.F. general service P.S. 40 lamp has output of 10,000 lumens and therefore would be recommended.

Using the same identical problem with a slight change the other equation can be used viz.:

> "The room to be lighted is a school classroom, 20 ft. wide, 40 ft. long. Two rows of fixtures on 10 ft. centers. The ceiling is 12 ft. high. Ceiling paint, flat white good

clean condition . . . side walls, light buff good clean condition. The Plasticlite No. 1860 has been selected as the type unit and 500-watt lamps per unit are to be used. What will be the resulting footcandles?"

The equation for this problem—

Footcandles (?) =

$$\frac{\text{Lamp Lumens} \times \text{Coef. of Util.} \times \text{Main. Fac.}}{\text{Area Sq. Ft. per Lamp}}$$

Fill in the equation exactly as before, however, knowing that 500-watt lamps are to be used, refer to Table of Lamp Lumens which specifies Lumen output for 500-watt lamp—thus the equation ready for computing is:

$$\text{Footcandles} = \frac{10{,}000 \times .39 \times .65}{100} = \frac{2535}{100} \text{ or } 25 \text{ F.C.}$$

TABLE OF ROOM INDEX

(Classification of rooms according to their proportions)

		CEILING HEIGHT—FEET										
For Semi-Indirect and Indirect Lighting		9 and 9½	10 to 11½	12 to 13½	14 to 16½	17 to 20	21 to 24	25 to 30	31 to 36	37 to 50		
		MOUNTING HEIGHT ABOVE FLOOR—FEET										
For Direct and Semi-Direct Lighting		7 and 7½	8 and 8½	9 and 9½	10 to 11½	12 to 13½	14 to 16½	17 to 20	21 to 24	25 to 30	31 to 36	37 to 50
Room Width (Feet)	Room Length (Feet)	ROOM INDEX										
9 (8½–9)	8-10	H	I	J	J							
	10-14	H	I	I	J							
	14-20	G	H	I	J	J						
	20-30	G	G	H	I	J	J					
	30-42	F	G	H	I	J	J	J				
	42-up	E	F	G	H	I	J	J				
10 (9½–10½)	10-14	G	H	I	J	J						
	14-20	G	H	I	J	J	J					
	20-30	F	G	H	I	J	J					
	30-42	F	G	G	H	I	J	J				
	42-60	E	F	G	H	I	J	J				
	60-up	E	F	F	H	H	I	J				
12 (11–12½)	10-14	G	H	I	I	J	J					
	14-20	F	G	H	I	J	J					
	20-30	F	G	G	H	I	J	J				
	30-42	E	F	G	H	I	J	J				
	42-60	E	F	F	G	H	I	J				
	60-up	E	E	F	G	H	I	J				
14 (13–15½)	14-20	F	G	H	H	I	J	J				
	20-30	E	F	G	H	I	J	J				
	30-42	E	F	F	G	H	I	J	J			
	42-60	E	E	F	F	H	I	J	J	J		
	60-90	D	E	E	F	G	H	J	J	J		
	90-up	D	E	E	F	F	G	I	J	J		
17 (16–18½)	14-20	E	F	G	H	I	J	J				
	20-30	E	F	F	G	H	I	J				
	30-42	D	E	F	G	H	H	J	J	J		
	42-60	D	E	E	F	G	G	I	J	J	J	
	60-110	D	E	E	F	G	G	I	J	J	J	
	110-up	C	D	E	E	F	G	H	I	J	J	
20 (19–21½)	20-30	D	E	F	G	H	I	J	J			
	30-42	D	E	E	F	G	H	I	J	J		
	42-60	D	D	E	E	F	G	I	J	J	J	
	60-90	C	D	E	E	F	G	H	J	J	J	
	90-140	C	D	D	E	F	F	H	I	I	J	J
	140-up	C	D	D	E	F	F	H	H	I	J	J
24 (22–26)	20-30	D	E	E	F	G	H	I	J	J		
	30-42	C	D	E	F	G	G	I	J	J		
	42-60	C	D	D	E	F	G	H	I	J	J	
	60-90	C	D	D	E	F	F	H	I	J	J	J
	90-140	C	C	D	E	E	F	G	H	I	J	J
	140-up	C	C	D	E	E	F	G	H	I	I	J
30 (27–33)	30-42	C	D	D	E	F	G	H	I	J	J	
	42-60	C	C	D	D	F	F	H	H	I	J	
	60-90	B	C	C	D	E	F	G	H	I	J	J
	90-140	B	C	C	D	E	E	F	G	H	I	J
	140-180	B	C	C	D	E	E	F	G	H	I	J
	180-up	B	C	C	D	E	E	F	G	H	I	J
36 (34–39)	30-42	B	C	D	E	F	F	H	I	I	J	
	42-60	B	C	C	D	E	F	G	H	I	J	J
	60-90	A	C	C	C	E	E	F	H	H	J	J
	90-140	A	B	C	C	D	E	F	G	H	I	J
	140-200	A	B	C	C	D	E	F	F	G	H	I
	200-up	A	B	C	C	D	E	F	F	G	H	I
42 (40–45)	42-60	A	B	C	C	E	F	G	H	I	I	J
	60-90	A	B	B	C	D	E	F	G	H	I	J
	90-140	A	B	B	C	D	D	E	F	G	H	J
	140-200	A	A	B	C	D	D	E	F	G	H	I
	200-up	A	A	B	C	D	D	E	F	F	G	I
50 (46–55)	42-60	A	A	B	C	D	E	F	G	H	I	J
	60-90	A	A	B	C	C	D	F	F	G	H	J
	90-140	A	A	A	C	C	D	E	F	F	G	I
	140-200	A	A	A	C	C	D	E	E	F	G	I
	200-up	A	A	A	C	C	D	E	E	F	G	H
60 (56–67)	60-90	A	A	A	B	C	D	E	F	G	H	I
	90-140	A	A	A	B	C	C	D	E	F	G	H
	140-200	A	A	A	B	C	C	D	E	E	F	H
	200-up	A	A	A	B	C	C	D	E	E	F	H
75 (68–90)	60-90	A	A	A	A	B	C	D	E	F	G	I
	90-140	A	A	A	A	B	C	D	E	F	F	H
	140-200	A	A	A	A	B	B	C	D	E	F	G
	200-up	A	A	A	A	B	B	C	D	E	F	G
90 or more	60-90	A	A	A	A	B	C	D	E	F	G	H
	90-140	A	A	A	A	A	B	C	D	E	F	G
	140-200	A	A	A	A	A	B	C	D	E	F	G
	200-up	A	A	A	A	A	B	C	C	D	E	F

TABLE OF COEFFICIENTS OF UTILIZATION (Computed from Electrical Testing Laboratory curves of Art Metal equipment.)

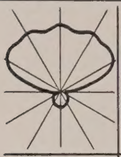
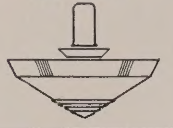
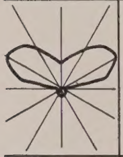
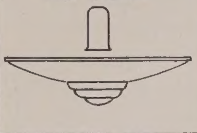
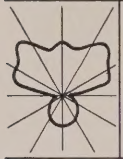
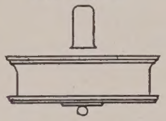
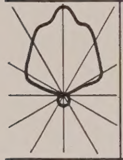
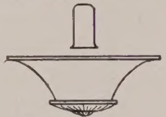
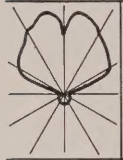
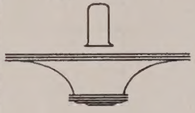
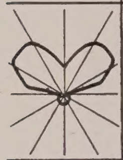
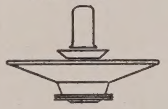
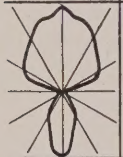
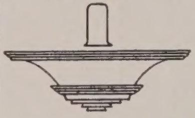
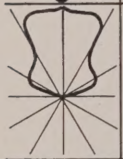
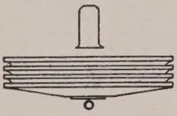
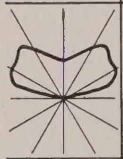
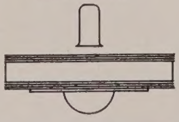
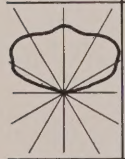
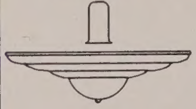
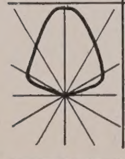
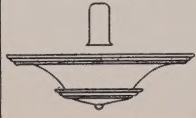
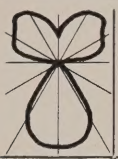
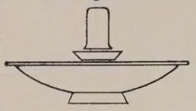
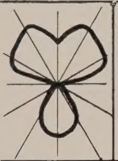
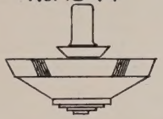
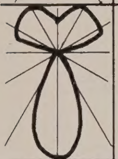
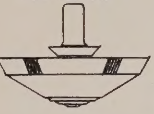
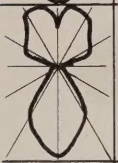
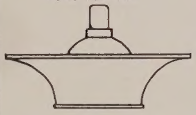
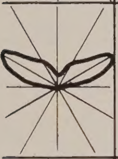
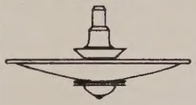
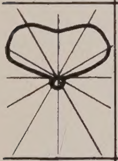
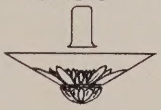
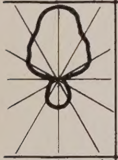
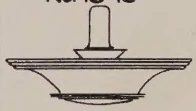
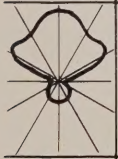
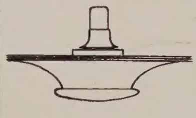
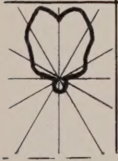
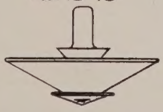
Type of Light Distribution	Art Metal Standard Listed Catalog Lighting Equipment	Ceiling	80%			50%			30%		Maintenance Factors	SUGGESTED USES
		Walls	50%	30%	10%	50%	30%	10%	30%	10%		
		Room Index	COEFFICIENTS OF UTILIZATION									
	No. 1860 	J	.18	.14	.12	.12	.10	.08	.06	.05	.75 Clean .65 AV. .60 Dirty	SCHOOL CLASSROOMS GENERAL OFFICES GENERAL STORES (SMALL)
		I	.23	.19	.16	.16	.13	.11	.09	.08		
		H	.27	.22	.20	.18	.15	.13	.10	.09		
		G	.31	.26	.22	.21	.18	.16	.12	.11		
		F	.33	.28	.25	.23	.20	.18	.13	.12		
		E	.39	.33	.30	.26	.22	.20	.15	.14		
		D	.42	.37	.33	.28	.25	.23	.17	.16		
		C	.45	.40	.37	.30	.27	.25	.18	.17		
		B	.49	.45	.42	.32	.30	.28	.20	.19		
		A	.51	.48	.44	.35	.32	.30	.22	.20		
	No. 1782S 	J	.16	.12	.10	.10	.08	.07	.05	.04	.70 Clean .65 AV. .60 Dirty	GENERAL OFFICES SPECIALTY SHOPS LOBBIES — BUILDING HOTEL CHURCHES
		I	.20	.16	.14	.13	.11	.09	.06	.05		
		H	.23	.19	.17	.15	.12	.11	.08	.06		
		G	.27	.23	.19	.18	.15	.13	.09	.08		
		F	.30	.25	.22	.19	.16	.14	.10	.09		
		E	.34	.29	.26	.22	.19	.17	.11	.10		
		D	.37	.33	.29	.23	.21	.19	.13	.12		
		C	.40	.36	.32	.25	.23	.21	.14	.13		
		B	.44	.40	.37	.27	.26	.24	.16	.15		
		A	.46	.43	.39	.30	.27	.26	.17	.16		
	No. 1830S 	J	.17	.13	.11	.12	.10	.08	.07	.06	.65 Clean .60 AV. .55 Dirty	SPECIALTY SHOPS EXECUTIVE OFFICES LOBBIES — BUILDING HOTEL THEATER LOUNGES
		I	.22	.18	.15	.15	.13	.11	.09	.08		
		H	.25	.21	.19	.17	.14	.13	.11	.09		
		G	.28	.24	.21	.20	.17	.15	.12	.11		
		F	.30	.26	.23	.22	.19	.17	.13	.12		
		E	.35	.31	.28	.24	.21	.20	.15	.14		
		D	.38	.34	.31	.26	.24	.22	.17	.16		
		C	.40	.36	.33	.27	.25	.24	.18	.17		
		B	.44	.41	.38	.30	.28	.26	.19	.18		
		A	.46	.43	.40	.32	.29	.28	.21	.19		
	No. 1732S 	J	.15	.12	.10	.10	.08	.07	.05	.04	.65 Clean .60 AV. .55 Dirty	GENERAL STORES GENERAL OFFICES SMALL ASSEMBLY ROOMS
		I	.20	.16	.14	.13	.11	.09	.07	.06		
		H	.23	.19	.17	.15	.12	.11	.08	.07		
		G	.27	.21	.19	.18	.15	.13	.09	.08		
		F	.29	.24	.21	.19	.16	.15	.10	.09		
		E	.33	.29	.26	.22	.19	.17	.12	.11		
		D	.36	.32	.29	.23	.21	.19	.13	.12		
		C	.38	.35	.32	.25	.22	.21	.14	.13		
		B	.42	.39	.36	.27	.25	.24	.16	.15		
		A	.44	.41	.38	.29	.27	.25	.17	.16		
	No. 1863 	J	.16	.12	.10	.10	.09	.07	.05	.05	.65 Clean .60 AV. .55 Dirty	WOMEN'S DRESS SHOPS CANDY — FOOD SHOPS PRIVATE OFFICES
		I	.20	.16	.14	.14	.11	.10	.07	.06		
		H	.23	.19	.17	.15	.13	.11	.09	.07		
		G	.26	.22	.19	.18	.15	.14	.10	.09		
		F	.29	.24	.20	.20	.17	.15	.11	.10		
		E	.33	.29	.26	.22	.19	.17	.13	.12		
		D	.36	.32	.29	.24	.21	.20	.14	.13		
		C	.38	.34	.31	.25	.23	.21	.15	.14		
		B	.42	.39	.36	.27	.26	.24	.17	.16		
		A	.44	.41	.38	.30	.27	.26	.18	.17		
	No. 1915 	J	.15	.11	.10	.10	.09	.07	.05	.04	.65 Clean .60 AV. .55 Dirty	GENERAL STORES (SMALL) GENERAL OFFICES SPECIALTY SHOPS
		I	.20	.16	.14	.14	.11	.09	.07	.06		
		H	.23	.19	.17	.15	.13	.11	.09	.07		
		G	.26	.22	.19	.18	.15	.13	.10	.09		
		F	.29	.24	.21	.20	.17	.15	.11	.10		
		E	.33	.29	.26	.22	.19	.17	.13	.12		
		D	.36	.32	.29	.24	.21	.20	.14	.13		
		C	.38	.34	.31	.25	.23	.21	.15	.14		
		B	.42	.39	.36	.28	.26	.24	.17	.16		
		A	.44	.41	.38	.30	.27	.26	.18	.17		
	No. 1758S 	J	.17	.13	.11	.12	.10	.08	.07	.06	.70 Clean .65 AV. .60 Dirty	AUTOMOBILE SHOW ROOMS CHURCHES GENERAL STORES JEWELRY STORES
		I	.22	.18	.16	.15	.13	.11	.09	.08		
		H	.25	.21	.19	.17	.15	.13	.11	.09		
		G	.28	.24	.21	.20	.17	.10	.12	.11		
		F	.31	.26	.23	.21	.18	.17	.13	.12		
		E	.35	.31	.28	.24	.21	.19	.15	.14		
		D	.38	.34	.26	.26	.23	.22	.16	.15		
		C	.42	.37	.34	.27	.25	.23	.17	.16		
		B	.44	.41	.38	.29	.28	.26	.19	.18		
		A	.46	.43	.41	.32	.29	.28	.20	.19		
	No. 1787S 	J	.14	.11	.09	.09	.07	.06	.04	.03	.65 Clean .60 AV. .55 Dirty	SOCIAL CLUBS DINING ROOMS LOBBIES — HOTEL THEATER COCKTAIL LOUNGE
		I	.19	.15	.13	.12	.09	.08	.05	.04		
		H	.22	.18	.15	.13	.11	.09	.07	.05		
		G	.25	.21	.18	.16	.13	.12	.07	.07		
		F	.27	.23	.20	.17	.15	.13	.08	.07		
		E	.32	.27	.24	.20	.17	.15	.10	.09		
		D	.35	.30	.27	.21	.19	.17	.11	.10		
		C	.37	.33	.30	.23	.20	.19	.12	.11		
		B	.40	.37	.35	.24	.23	.22	.13	.13		
		A	.43	.40	.37	.27	.25	.23	.15	.13		
	No. 1780S 	J	.12	.09	.08	.07	.06	.05	.03	.02	.65 Clean .60 AV. .55 Dirty	PRIVATE OFFICES SPECIALTY SHOPS TEA ROOMS DINING ROOMS LOUNGES
		I	.16	.13	.11	.10	.08	.07	.04	.04		
		H	.18	.15	.13	.11	.09	.08	.06	.04		
		G	.21	.18	.15	.14	.11	.10	.06	.06		
		F	.23	.20	.17	.15	.12	.11	.07	.06		
		E	.27	.23	.21	.17	.14	.13	.08	.07		
		D	.29	.26	.23	.18	.16	.15	.09	.09		
		C	.31	.28	.26	.19	.17	.16	.10	.09		
		B	.34	.32	.29	.21	.20	.18	.11	.11		
		A	.36	.34	.31	.23	.21	.20	.13	.11		
	No. 1733S 	J	.15	.11	.09	.09	.07	.06	.04	.03	.65 Clean .60 AV. .55 Dirty	SCHOOL CLASSROOMS OFFICES GENERAL — WHERE THERE IS WIDE SPACING AND LOW MOUNTING
		I	.19	.15	.13	.12	.09	.08	.05	.04		
		H	.22	.18	.16	.13	.11	.09	.06	.05		
		G	.26	.21	.18	.16	.13	.12	.07	.06		
		F	.28	.23	.20	.18	.15	.13	.08	.07		
		E	.32	.28	.25	.20	.17	.15	.09	.09		
		D	.35	.31	.28	.21	.19	.17	.13	.12		
		C	.37	.34	.31	.23	.20	.19	.14	.13		
		B	.41	.38	.35	.25	.23	.22	.15	.14		
		A	.43	.40	.37	.27	.25	.23	.17	.15		
	No. 1759S 	J	.14	.11	.09	.09	.07	.06	.04	.03	.65 Clean .60 AV. .55 Dirty	BANKS AUDITORIUMS GENERAL OFFICES
		I	.19	.15	.13	.12	.09	.08	.05	.04		
		H	.22	.18	.16	.13	.11	.09	.07	.05		
		G	.25	.21	.18	.16	.13	.11	.07	.06		
		F	.27	.23	.20	.17	.14	.13	.08	.07		
		E	.32	.27	.24	.20	.17	.15	.10	.09		
		D	.35	.30	.27	.21	.19	.17	.11	.10		
		C	.37	.33	.30	.23	.20	.19	.12	.11		
		B	.41	.38	.35	.25	.23	.22	.13	.13		
		A	.43	.40	.37	.27	.25	.23	.15	.13		

TABLE OF COEFFICIENTS OF UTILIZATION (Computed from Electrical Testing Laboratory curves of Art Metal equipment.

Type of Light Distribution	Art Metal Standard Listed Catalog Lighting Equipment	Ceiling	80%			50%			30%		Maintenance Factors	SUGGESTED USES
		Walls	50%	30%	10%	50%	30%	10%	30%	10%		
		Room Index	COEFFICIENTS OF UTILIZATION									
	No. 1930 	J	.22	.17	.15	.17	.14	.12	.11	.10	.75 Clean .65 AV. .60 Dirty	GENERAL STORES DISPLAY ROOMS SPECIALTY SHOPS AUTOMOBILE SHOW ROOMS JEWELRY STORES
		I	.28	.23	.21	.21	.18	.16	.15	.13		
		H	.31	.27	.25	.24	.21	.19	.17	.15		
		G	.35	.31	.27	.27	.24	.22	.19	.18		
		F	.38	.33	.30	.29	.26	.24	.20	.19		
		E	.43	.38	.35	.32	.29	.27	.23	.22		
		D	.46	.42	.39	.35	.32	.30	.25	.24		
		C	.49	.45	.42	.36	.34	.32	.26	.25		
		B	.53	.49	.46	.39	.37	.35	.29	.27		
		A	.55	.52	.49	.41	.39	.37	.30	.29		
	No. 1944 	J	.20	.15	.13	.15	.12	.10	.09	.07	.75 Clean .65 AV. .60 Dirty	GENERAL STORES DISPLAY ROOMS SUPER-MARKETS SMALL ASSEMBLY ROOMS JEWELRY STORES
		I	.26	.21	.18	.19	.16	.14	.12	.10		
		H	.29	.25	.22	.21	.18	.16	.14	.12		
		G	.34	.29	.25	.25	.21	.19	.16	.14		
		F	.36	.31	.28	.27	.23	.21	.17	.16		
		E	.41	.36	.33	.30	.26	.24	.20	.18		
		D	.45	.40	.36	.32	.29	.27	.22	.21		
		C	.48	.43	.40	.34	.31	.29	.23	.22		
		B	.52	.48	.45	.37	.35	.33	.25	.24		
		A	.54	.51	.47	.39	.36	.35	.27	.25		
	No. 1943 	J	.21	.16	.14	.16	.13	.11	.10	.08	.75 Clean .65 AV. .60 Dirty	GENERAL STORES DISPLAY ROOMS SUPER-MARKETS SMALL ASSEMBLY ROOMS JEWELRY STORES
		I	.27	.22	.19	.21	.17	.15	.13	.12		
		H	.31	.26	.23	.23	.20	.17	.16	.14		
		G	.35	.30	.26	.26	.23	.20	.17	.16		
		F	.38	.33	.29	.29	.25	.22	.19	.17		
		E	.43	.38	.34	.32	.28	.26	.22	.20		
		D	.47	.42	.38	.34	.31	.29	.24	.23		
		C	.50	.45	.41	.36	.33	.31	.26	.24		
		B	.54	.50	.47	.39	.37	.35	.28	.27		
		A	.57	.53	.49	.42	.39	.37	.30	.28		
	No. 1946 	J	.19	.14	.12	.15	.12	.10	.10	.08	.75 Clean .70 AV. .65 Dirty	GENERAL STORES DISPLAY ROOMS SUPER-MARKETS ARCADES JEWELRY STORES
		I	.24	.20	.17	.20	.16	.14	.14	.12		
		H	.27	.23	.20	.22	.19	17	.16	.14		
		G	.30	.23	.23	.25	.21	.19	.18	.16		
		F	.33	.26	.25	.27	.23	.21	.19	.18		
		E	.37	.29	.30	.30	.26	.24	.22	.21		
		D	.40	.36	.33	.32	.29	.27	.25	.23		
		C	.43	.39	.35	.34	.31	.29	.26	.25		
		B	.46	.43	.40	.37	.34	.32	.28	.27		
		A	.48	.45	.42	.39	.36	.34	.30	.28		
	No. 1947 	J	.14	.11	.09	.09	.07	.06	.04	.03	.65 Clean .60 AV. .55 Dirty	SCHOOL CLASSROOMS OFFICES GENERAL—WHERE THERE IS WIDE SPACING AND LOW MOUNTING
		I	.19	.15	13	.12	.09	.08	.05	.04		
		H	.22	.18	.16	.13	.11	.09	.07	.05		
		G	.25	.20	.18	.16	.13	.12	.07	.07		
		F	.27	.23	.20	.17	.15	.13	.08	.07		
		E	.32	.27	.24	.20	.17	.15	.10	.09		
		D	.35	.30	.27	.21	.19	.17	.11	.10		
		C	.37	.33	.30	.23	.20	.19	.12	.11		
		B	.40	.37	.35	.25	.23	.22	.13	.13		
		A	.42	.40	.37	.27	.25	.23	.15	.13		
	No. 1819 	J	.18	.14	.12	.12	.10	.08	.06	.05	.75 Clean .65 AV. .60 Dirty	SCHOOL CLASSROOMS SCHOOL AUDITORIUMS GENERAL OFFICES GENERAL STORES (SMALL)
		I	.23	.19	.16	.15	.13	.11	.08	.07		
		H	.26	.22	.20	.17	.14	.13	.10	.08		
		G	.31	.26	.22	.20	.17	.15	.11	.10		
		F	.33	.28	.25	.22	.19	.17	.12	.11		
		E	.38	.33	.30	.25	.21	.20	.14	.13		
		D	.41	.37	.33	.27	.24	.22	.16	.15		
		C	.44	.40	.36	.28	.26	.24	.16	.16		
		B	.48	.45	.41	.31	.29	.27	.18	.17		
		A	.51	.47	.44	.33	.31	.29	.20	.18		
	No. 1948 	J	.15	.12	.10	.11	.09	.07	.06	.05	.65 Clean .60 AV. .55 Dirty	PRIVATE OFFICES WOMEN'S DRESS SHOPS CANDY—FOOD SHOPS BANKS
		I	.19	.16	.14	.14	.11	.10	.08	.07		
		H	.22	.19	.17	.15	.13	.12	.10	.08		
		G	.25	.21	.19	.18	.15	.14	.11	.10		
		F	.27	.23	.21	.19	.17	15	.12	.11		
		E	.31	.27	.24	.21	.19	.17	.13	.13		
		D	.33	.30	.27	.23	.21	.20	.15	.14		
		C	.35	.32	.30	.24	.22	.21	.16	.15		
		B	.38	.36	.33	.26	.25	.23	.17	.16		
		A	.40	.38	.35	.28	.26	.25	.18	.17		
	No. 6251 	J	.16	.13	.11	.12	.09	.08	.06	.05	.75 Clean .65 AV. .60 Dirty	GENERAL OFFICES SCHOOL CLASSROOMS GENERAL STORE DINING ROOMS
		I	.21	.17	.15	.15	.12	.11	.09	.08		
		H	.24	.20	.18	.17	.14	.13	.11	.09		
		G	.28	.23	.20	.20	.17	.15	.12	.10		
		F	.30	.26	.23	.21	.18	.16	.13	.12		
		E	.34	.30	.27	.24	.21	.19	.15	.14		
		D	.37	.33	.30	.26	.23	.22	.17	.16		
		C	.40	.36	.33	.27	.25	.23	.18	.16		
		B	.43	.40	.37	.30	.28	.26	.19	.18		
		A	.45	.42	.39	.32	.29	.28	.21	.19		
	No. 1949 	J	.16	.12	.10	.11	.09	.07	.06	.05	.65 Clean .60 AV. .55 Dirty	GENERAL STORES (SMALL) GENERAL OFFICES SPECIALTY SHOPS
		I	.20	.16	.14	.14	.11	.10	.08	.07		
		H	.23	.19	.17	.15	.13	.12	.09	.08		
		G	.26	.22	.19	.18	.15	.14	.10	.10		
		F	.29	.24	.22	.20	.17	.15	.11	.11		
		E	.33	.29	.26	.22	.19	.18	.13	.12		
		D	.34	.32	.29	.24	.22	.20	.15	.14		
		C	.38	.34	.31	.25	.23	.22	.16	.14		
		B	.41	.38	.35	.27	.26	.24	.17	.16		
		A	.43	.40	.38	.29	.27	.26	.19	.17		

ALL EQUIPMENT LISTED IN THIS CATALOG IS APPROVED BY THE UNDERWRITERS' LABORATORIES, INC., AND IS LABELED AS EVIDENCE THEREOF.

TABLE OF COEFFICENTS OF UTILIZATION (Of The Art Metal Optical System of Direct Illumination)

Art Metal Standard Listed Lighting Equipment Catalog Number	Ceiling	75%			50%			30%		Maintenance Factors
	Walls	50%	30%	10%	50%	30%	10%	30%	10%	
	Room Index	COEFFICIENTS OF UTILIZATION								
450 467 476 480 481	J	.31	.29	.28	.30	.29	.28	.30	.28	.85 Clean .75 AV.
	I	.36	.35	.34	.36	.34	.34	.34	.33	
	H	.39	.38	.38	.38	.38	.37	.38	.36	
	G	.41	.41	.40	.40	.40	.39	.40	.38	
	F	.43	.42	.40	.42	.41	.40	.41	.40	
	E	.46	.45	.45	.45	.45	.42	.43	.42	
	D	.49	.47	.46	.47	.46	.45	.45	.45	
	C	.49	.48	.47	.48	.47	.46	.46	.45	
	B	.50	.49	.48	.49	.47	.47	.47	.47	
	A	.50	.49	.49	.49	.48	.47	.47	.47	
550 567 576	J	.30	.28	.28	.30	.28	.28	.30	.27	.85 Clean .75 AV.
	I	.37	.35	.35	.35	.35	.34	.35	.34	
	H	.39	.39	.37	.39	.37	.37	.37	.37	
	G	.42	.41	.41	.41	.39	.39	.39	.39	
	F	.44	.42	.42	.42	.41	.41	.41	.41	
	E	.46	.44	.44	.44	.44	.42	.44	.42	
	D	.48	.46	.46	.46	.46	.46	.46	.44	
	C	.49	.48	.46	.48	.46	.46	.46	.46	
	B	.49	.48	.48	.48	.48	.46	.46	.46	
	A	.49	.49	.48	.49	.48	.48	.48	.46	
474 574	J	.28	.26	.25	.27	.26	.25	.27	.25	.85 Clean .75 AV.
	I	.33	.32	.31	.33	.31	.31	.31	.30	
	H	.36	.35	.35	.35	.35	.34	.35	.33	
	G	.37	.37	.36	.36	.36	.36	.36	.35	
	F	.39	.38	.37	.38	.37	.36	.37	.36	
	E	.41	.40	.40	.40	.40	.38	.39	.38	
	D	.44	.42	.41	.42	.41	.40	.40	.40	
	C	.44	.43	.42	.43	.42	.41	.41	.40	
	B	.45	.44	.43	.44	.42	.42	.42	.42	
	A	.45	.44	.44	.44	.43	.42	.42	.42	
457 478 557 578	J	.20	.19	.18	.20	.19	.18	.20	.18	.85 Clean .75 AV.
	I	.24	.23	.22	.24	.22	.22	.22	.22	
	H	.26	.25	.25	.25	.25	.24	.25	.24	
	G	.27	.27	.27	.27	.27	.26	.27	.25	
	F	.29	.28	.27	.28	.27	.27	.27	.27	
	E	.30	.29	.29	.29	.29	.28	.29	.28	
	D	.32	.31	.30	.31	.30	.29	.29	.29	
	C	.32	.32	.31	.32	.31	.30	.30	.29	
	B	.33	.32	.32	.32	.31	.31	.31	.31	
	A	.33	.32	.32	.32	.32	.31	.31	.31	

THE POINT-BY-POINT METHOD FOR DIRECT LIGHTING CALCULATIONS

The point-by-point method for direct lighting calculations is based on the "inverse square law": that is, the illumination varies as the square of the distance from the light source to the point of measurement.

In specialized equipment to produce a specific type of distribution of light, the distribution curve of the particular unit must be studied from the standpoint of efficiency and light control, and the candlepower distribution at various angles. Only from such a curve or data is it possible to compute footcandles at a given point from one or more units.

The candlepower distribution curves of all Art Metal Units are complete with candlepower values on the pages illustrating the unit. From these candlepower distribution curves of the units, the footcandles at any given point may be computed from the following formulae:

$$\text{(1) Footcandles} = \frac{CP}{D^2} \quad \frac{\text{(Candlepower)}}{\text{(Distance in feet)}}$$

(Normal to beam)

$$\text{(2) Footcandles} = \frac{CP}{D^2} \text{ Cosine of Angle A}$$

(On Horizontal plane)

Trigonometrical relationship

$$D = \frac{H}{\text{Cosine of Angle A}}$$

Substituting in (2)

$$\text{(3) Footcandles} = \frac{CP}{H^2} \text{ X Cosine}^3 \text{ A}$$

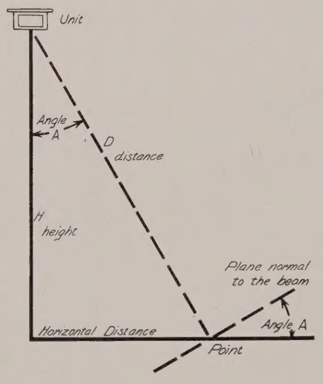


TABLE OF TRIGONOMETRIC FUNCTIONS TO BE SUBSTITUTED IN THE ABOVE FORMULAE

Angle	Cos. A	Cos.³ A	Angle	Cos. A	Cos.³ A	Angle	Cos. A	Cos.³ A	Angle	Cos. A	Cos.³ A	Angle	Cos. A	Cos.³ A	Angle	Cos. A	Cos.³ A
0	1.000	.000	16	.961	.888	31	.857	.630	46	.694	.335	61	.485	.114	76	.242	.0142
1	1.000	1.000	17	.956	.874	32	.848	.610	47	.682	.317	62	.469	.103	77	.225	.0114
2	.999	.998	18	.951	.860	33	.839	.590	48	.669	.300	63	.454	.0936	78	.208	.0090
3	.999	.995	19	.946	.845	34	.829	.570	49	.656	.282	64	.438	.0842	79	.191	.0069
4	.998	.993	20	.940	.829	35	.819	.550	50	.642	.265	65	.423	.0754	80	.174	.0052
5	.996	.988	21	.934	.813	36	.809	.529	51	.629	.249	66	.407	.0671	81	.156	.0038
6	.995	.983	22	.927	.797	37	.799	.509	52	.616	.233	67	.391	.0596	82	.139	.0027
7	.993	.978	23	.920	.780	38	.788	.489	53	.602	.218	68	.375	.0526	83	.122	.0018
8	.990	.971	24	.914	.762	39	.777	.469	54	.588	.203	69	.358	.0460	84	.105	.0011
9	.980	.963	25	.906	.744	40	.766	.449	55	.574	.189	70	.342	.0400	85	.0872	.0007
10	.985	.955	26	.899	.726	41	.755	.429	56	.559	.175	71	.326	.0345	86	.0698	.0003
11	.982	.945	27	.891	.707	42	.743	.410	57	.545	.161	72	.309	.0295	87	.0523	.0001
12	.978	.935	28	.883	.688	43	.731	.391	58	.530	.149	73	.292	.0250	88	.0349	
13	.974	.925	29	.875	.668	44	.719	.372	59	.515	.137	74	.276	.0209	89	.0175	
14	.970	.913	30	.866	.649	45	.707	.353	60	.500	.125	75	.259	.0173	90	.0000	
15	.966	.901															

In the following table the footcandles on the horizontal plane have been calculated from formula 2 on the preceding page for a source of 100 candlepower for a wide range of mounting heights and distances out from the unit. Given also is the angle in degrees so that at any given height and distance out, the actual candlepower for that particular angle may be taken directly from the distribution curve of the unit. By multiplying the delivered candlepower (in hundreds or fractions of hundreds) at this angle by the footcandles produced per hundred candlepower as given in the table, the resultant horizontal footcandles at the point may be obtained.

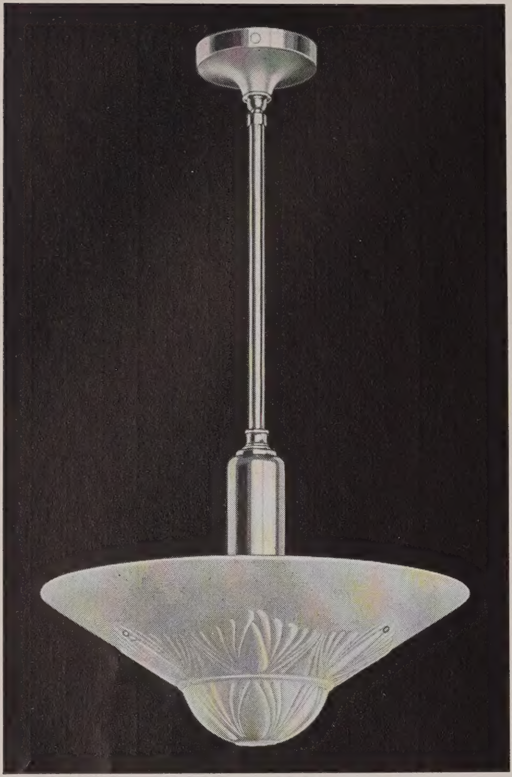
Upper Figures—Angle Between Light Ray and Vertical
Lower Figures—Footcandles on a Horizontal Plane Produced by a Source of 100 Candlepower

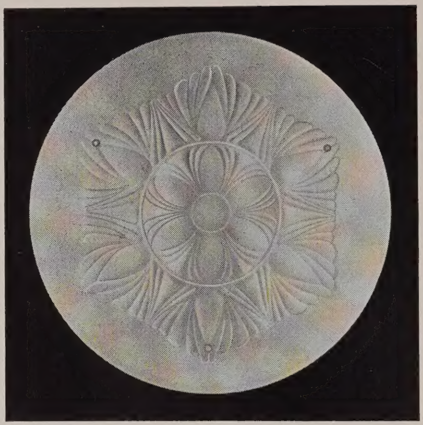
	HORIZONTAL DISTANCE FROM UNIT—FEET																												
HEIGHT OF LIGHT SOURCE ABOVE SURFACE TO BE LIGHTED—FEET	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	22	24	26	28	30	32	34	36
4	0° 0′ 6.250	14° 5.707	27° 4.472	37° 3.200	45° 2.210	51° 1.524	56° 1.066	60° .764	63° .559	66° .419	68° .320	70° .249	72° .198	73° .159	74° .130	75° .107	76° .090	77° .075	78° .064	78° .055	79° .047	80° .037	81° .028	81° .022	82° .018	82° .015	83° .012	83° .010	84° .008
5	0° 0′ 4.000	11° 3.771	22° 3.202	31° 2.522	39° 1.904	45° 1.414	50° 1.050	54° .785	58° .595	61° .458	63° .358	66° .283	67° .228	69° .185	70° .152	72° .126	73° .106	74° .090	74° .077	75° .066	76° .057	77° .044	78° .034	79° .027	80° .022	81° .017	81° .015	82° .012	82° .010
6	0° 0′ 2.778	9° 2.673	18° 2.372	27° 1.987	34° 1.600	40° 1.260	45° .982	49° .766	53° .600	56° .474	59° .378	61° .305	63° .249	66° .205	67° .170	68° .142	69° .120	71° .102	71° .088	72° .076	73° .066	75° .051	76° .040	77° .032	78° .026	79° .021	79° .017	80° .015	80° .012
7	0° 0′ 2.041	8° 1.980	16° 1.814	23° 1.585	30° 1.336	36° 1.100	41° .893	45° .722	49° .583	52° .473	55° .385	58° .316	60° .261	62° .218	63° .183	65° .154	66° .131	68° .113	69° .097	70° .084	71° .074	72° .057	74° .045	75° .036	76° .029	77° .024	78° .020	78° .017	79° .014
8	0° 0′ 1.563	7° 1.527	14° 1.427	21° 1.283	27° 1.118	32° .953	37° .800	41° .640	45° .552	48° .458	51° .381	54° .318	56° .267	58° .225	60° .191	62° .163	63° .140	65° .121	66° .105	67° .091	68° .080	70° .063	72° .050	73° .040	74° .032	75° .026	76° .022	77° .019	77° .016
9	0° 0′ 1.235	6° 1.212	13° 1.148	18° 1.054	24° .943	29° .825	34° .711	38° .607	42° .515	48° .437	58° .370	51° .314	53° .267	55° .228	57° .196	59° .168	61° .146	62° .126	63° .110	65° .097	66° .085	68° .067	69° .053	71° .043	72° .035	73° .029	74° .025	75° .021	76° .018
10	0° 0′ 1.000	5° 43′ .985	11° .943	17° .879	22° .801	27° .716	31° .631	35° .550	39° .476	42° .411	45° .354	48° .305	50° .263	52° .227	54° .196	56° .171	58° .149	60° .130	61° .115	62° .101	63° .089	66° .071	67° .057	69° .046	70° .038	72° .032	73° .027	74° .022	74° .019
11	0° 0′ .826	5° 12′ .816	10° .787	15° .742	20° .686	24° .623	29° .559	32° .496	36° .437	39° .383	42° .335	45° .292	48° .255	50° .223	52° .195	54° .171	56° .150	57° .132	59° .117	60° .104	61° .092	63° .074	65° .060	67° .049	69° .040	70° .034	71° .028	72° .024	73° .021
12	0° 0′ .694	4° 46′ .687	9° .668	14° .634	18° .593	23° .546	27° .497	30° .448	34° .400	37° .356	40° .315	43° .278	45° .246	47° .217	49° .191	51° .169	53° .150	55° .133	56° .119	58° .106	59° .094	61° .076	63° .062	65° .051	67° .043	68° .036	69° .030	71° .026	72° .022
13	0° 0′ .592	4° 24′ .587	9° .571	13° .547	17° .517	21° .481	25° .447	28° .404	32° .366	35° .329	38° .295	40° .263	43° .235	45° .200	47° .187	49° .166	51° .148	53° .133	54° .119	56° .106	57° .096	59° .078	62° .064	63° .053	65° .044	67° .037	68° .032	69° .027	70° .023
14	0° 0′ .510	4° 5′ .506	8° .495	12° .477	16° .454	20° .426	23° .396	27° .365	30° .334	33° .304	36° .275	38° .248	41° .223	43° .201	45° .180	47° .162	49° .146	51° .131	52° .118	54° .107	55° .096	58° .079	60° .065	62° .054	63° .046	65° .039	66° .033	68° .028	69° .024
15	0° 0′ .444	3° 49′ .442	8° .433	11° .419	15° .401	18° .380	22° .356	25° .331	28° .305	31° .280	34° .256	36° .233	39° .212	41° .192	43° .174	45° .157	47° .142	49° .129	50° .117	52° .106	53° .096	56° .079	58° .066	60° .055	62° .047	63° .040	65° .034	66° .029	67° .025
16	0° 0′ .391	3° 35′ .388	7° .382	11° .371	14° .357	17° .339	21° .321	24° .300	27° .280	29° .259	32° .238	35° .219	37° .200	39° .183	41° .167	43° .152	45° .138	47° .126	48° .115	50° .105	51° .095	54° .080	56° .067	58° .056	60° .048	62° .041	63° .035	65° .030	66° .026
17	0° 0′ .346	3° 22′ .344	7° .339	10° .331	13° .319	16° .306	19° .290	22° .274	25° .256	28° .239	30° .222	33° .205	35° .189	37° .174	39° .159	41° .146	43° .134	45° .122	47° .112	48° .103	50° .094	52° .079	55° .069	57° .057	59° .048	60° .042	62° .036	63° .031	65° .027
18	0° 0′ .309	3° 11′ .307	6° .303	9° .297	13° .287	16° .276	18° .264	21° .250	24° .236	27° .221	29° .206	31° .192	34° .178	36° .165	38° .152	40° .140	42° .129	43° .119	45° .109	47° .100	48° .092	51° .079	53° .067	55° .057	57° .049	59° .042	61° .036	62° .032	63° .028
19	0° 0′ .277	3° 1′ .276	6° .273	9° .267	12° .260	15° .251	18° .240	20° .229	23° .217	25° .205	28° .192	30° .180	32° .167	34° .156	36° .145	38° .134	40° .124	42° .115	43° .106	45° .098	46° .090	49° .077	52° .066	54° .057	56° .049	58° .042	59° .037	61° .032	62° .028
20	0° 0′ .250	2° 51′ .249	5° 43′ .246	9° .242	11° .236	14° .228	17° .219	19° .210	22° .200	24° .190	27° .179	29° .163	31° .158	33° .147	35° .137	37° .128	39° .119	40° .111	42° .103	44° .095	45° .088	48° .076	50° .066	52° .057	54° .049	56° .043	58° .037	60° .033	61° .029
21	0° 0′ .227	2° 44′ .226	5° 26′ .224	8° .220	11° .215	13° .210	16° .201	18° .194	21° .185	23° .176	25° .167	28° .158	30° .144	32° .139	34° .131	36° .122	37° .114	39° .107	41° .099	42° .092	44° .086	46° .075	49° .065	51° .056	53° .049	55° .043	57° .038	58° .033	60° .029
22	0° 0′ .207	2° 36′ .206	5° 10′ .205	8° .201	10° .196	13° .192	15° .185	18° .179	20° .171	22° .164	25° .155	27° .148	29° .140	31° .132	33° .124	34° .114	36° .109	38° .102	39° .096	41° .091	42° .084	45° .073	47° .064	50° .056	52° .049	54° .043	55° .038	57° .033	59° .029
23	0° 0′ .189	2° 29′ .189	4° 58′ .187	7° .184	10° .181	12° .176	15° .171	17° .165	19° .159	21° .153	24° .146	26° .139	28° .132	29° .125	31° .118	33° .111	35° .105	36° .098	38° .092	40° .087	41° .081	44° .071	46° .063	49° .055	51° .049	53° .043	54° .038	56° .033	57° .30
24	0° 0′ .174	2° 23′ .173	4° 45′ .172	7° .170	10° .166	12° .163	14° .158	16° .154	18° .148	21° .143	23° .137	25° .130	27° .124	28° .118	30° .112	32° .106	34° .100	35° .094	37° .089	38° .084	40° .079	43° .070	45° .061	47° .054	49° .048	51° .042	53° .037	55° .033	56° .030
25	0° 0′ .160	2° 17′ .160	4° 34′ .158	7° .157	9° .154	11° .151	14° .147	16° .143	18° .138	20° .133	22° .128	24° .123	26° .117	27° .112	29° .106	31° .101	33° .096	34° .091	36° .086	37° .081	39° .076	41° .068	44° .060	46° .053	48° .047	50° .042	52° .037	54° .033	55° .030
27	0° 0′ .137	2° 7′ .137	4° 14′ .136	6° .135	8° .133	10° .130	12° .128	15° .124	17° .121	18° .117	20° .113	22° .109	24° .105	26° .100	27° .096	29° .092	31° .087	32° .083	34° .079	35° .075	37° .071	39° .064	42° .057	44° .051	46° .046	48° .041	50° .037	52° .033	53° .030
30	0° 0′ .111	1° 54′ .111	3° 50′ .111	5° 43′ .109	8° .108	9° .107	11° .105	13° .103	15° .100	17° .098	18° .095	20° .092	22° .089	23° .086	25° .083	27° .080	28° .077	30° .073	31° .070	32° .067	34° .064	36° .058	39° .053	41° .048	43° .043	45° .039	47° .036	49° .032	50° .029
33	0° 0′ .092	1° 44′ .092	3° 28′ .091	5° 12′ .091	7° .090	9° .089	10° .087	12° .086	14° .084	15° .082	17° .080	18° .078	20° .076	22° .074	23° .072	24° .069	26° .067	27° .065	29° .062	30° .060	31° .058	34° .053	36° .049	38° .045	40° .041	42° .037	44° .034	46° .031	47° .028
36	0° 0′ .077	1° 36′ .077	3° 11′ .077	4° 46′ .076	6° .076	8° .075	9° .074	11° .073	13° .072	14° .070	16° .069	17° .067	18° .066	20° .064	21° .062	23° .061	24° .059	25° .057	27° .055	28° .053	29° .052	31° .048	34° .044	36° .041	38° .038	40° .035	42° .032	43° .030	45° .027
40	0° 0′ .063	1° 26′ .062	2° 52′ .062	4° 17′ .062	5° 43′ .062	7° .061	9° .060	10° .060	11° .059	13° .058	14° .057	15° .056	17° .055	18° .054	19° .053	21° .051	22° .050	23° .049	24° .047	25° .046	27° .045	29° .042	31° .039	33° .037	35° .034	37° .032	39° .030	40° .028	42° .026
45	0° 0′ .049	1° 16′ .049	2° 33′ .049	3° 49′ .049	5° 5′ .049	6° .049	8° .048	9° .048	10° .047	11° .047	13° .046	14° .045	15° .045	16° .044	17° .043	18° .042	20° .041	21° .040	22° .040	23° .039	29° .038	26° .036	28° .034	30° .032	32° .030	34° .028	35° .027	37° .025	39° .024
50	0° 0′ .040	1° 9′ .040	2° 17′ .040	3° 26′ .040	4° 34′ .040	5° 43′ .039	7° .039	8° .039	9° .039	10° .038	11° .038	12° .037	14° .037	15° .036	16° .036	16° .035	18° .035	19° .034	20° .033	21° .033	22° .032	24° .031	26° .029	27° .028	29° .027	31° .025	33° .024	34° .023	36° .021

HEIGHT OF LIGHT SOURCE ABOVE SURFACE TO BE LIGHTED—FEET

THE CAPITOL HILUX

A Dense White Reflecting Glass

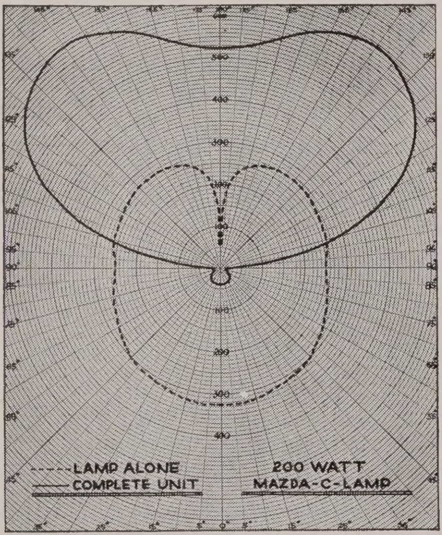




Illustrating the embossed glass.

THE CAPITOL HILUX GLASS FEATURES

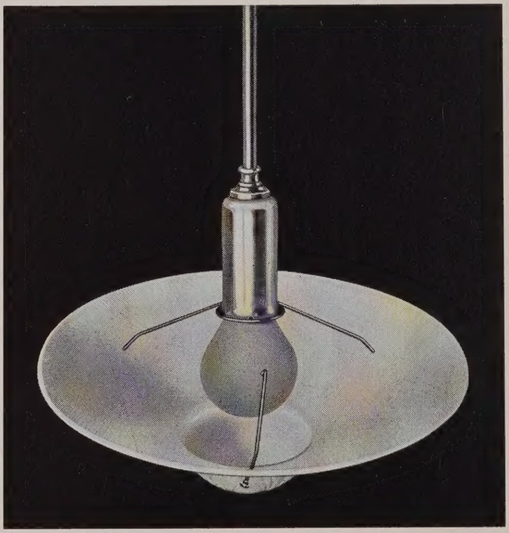
1. **A whiter glass when lighted.**
2. **Constant reflection factor of 83%.**
3. **Wide upward distribution of light.**
4. **Low surface brightness.**
5. **An embossed ornamentation on the glass for surface decoration.**
6. **Easy maintenance, merely release one rod for cleaning or relamping.**



The light distribution of the CAPITOL is illustrated by this characteristic curve.

SURFACE BRIGHTNESS VALUES of the Capitol Bowl range from .2 to 1.9 Candle Power per square inch with a 300W Lamp.

(Right) Illustration showing bowl supporting rods with one released for easy maintenance while unit is suspended.

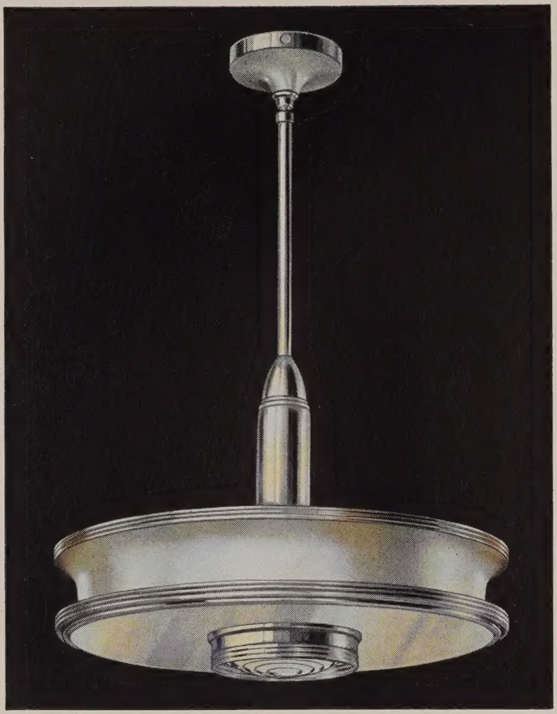


DATA

No. 1818	Chain Pendant	16″ Dia.	30″ Suspension	36″ O. A.	Medium	200-300W
No. 1818S	Swivel Stem Pendant	16″ Dia.	30″ Suspension	36″ O. A.	Medium	200-300W
No. 1818C	Close Ceiling Style	16″ Dia.		16″ O. A.	Medium	200-300W
No. 1819	Chain Pendant	18″ Dia.	30″ Suspension	37″ O. A.	Mogul	300-500W
No. 1819S	Swivel Stem Pendant	18″ Dia.	30″ Suspension	37″ O. A.	Mogul	300-500W
No. 1819C	Close Ceiling Style	18″ Dia.		18″ O. A.	Mogul	300-500W
No. 1823	Chain Pendant	22″ Dia.	36″ Suspension	45″ O. A.	Mogul	750-1500W
No. 1823S	Swivel Stem Pendant	22″ Dia.	36″ Suspension	45″ O. A.	Mogul	750-1500W

Standard Finish: Silvertint.

THE SHELBOURNE



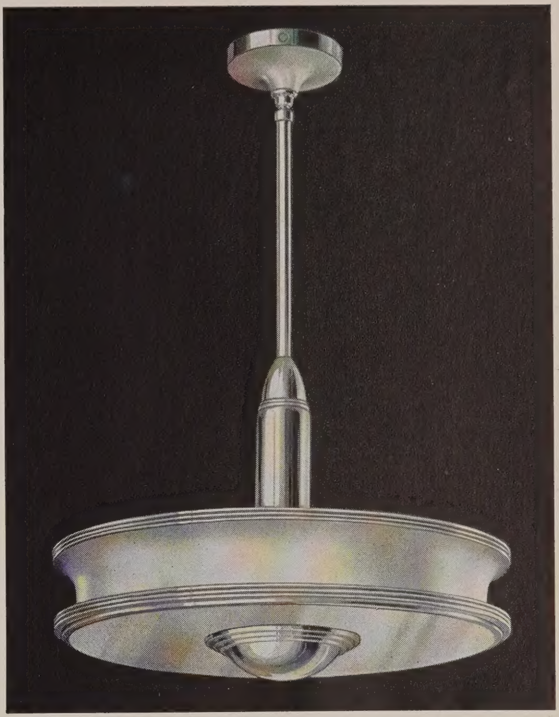
Direct-indirect, luminous drum, double thickness flashed opal glass bottom, metal skirt houses Art Metal "Widelite" Glass lens.

No. 1952 20″ Dia. 30″ Susp. 36″ O. A. 300-500W

Standard Finish: Silvertint.

Optional Finish: Goldtint.

Furnished with a non-absorbing light baffle.



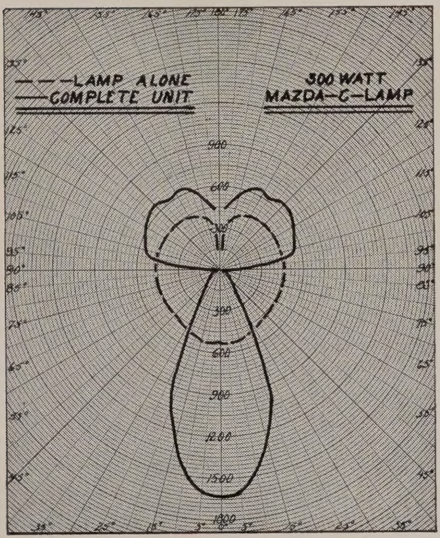
Semi-indirect, luminous drum, double thickness flashed opal glass bottom, polished metal cup.

No. 1951 20″ Dia. 30″ Susp. 36″ O. A. 300-500W

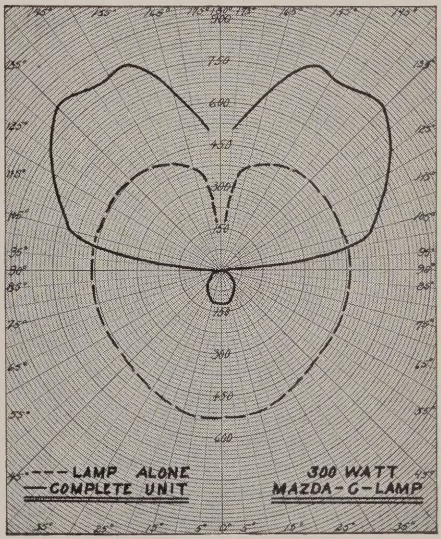
Standard Finish: Silvertint.

Optional Finish: Goldtint.

Furnished with a non-absorbing light baffle.

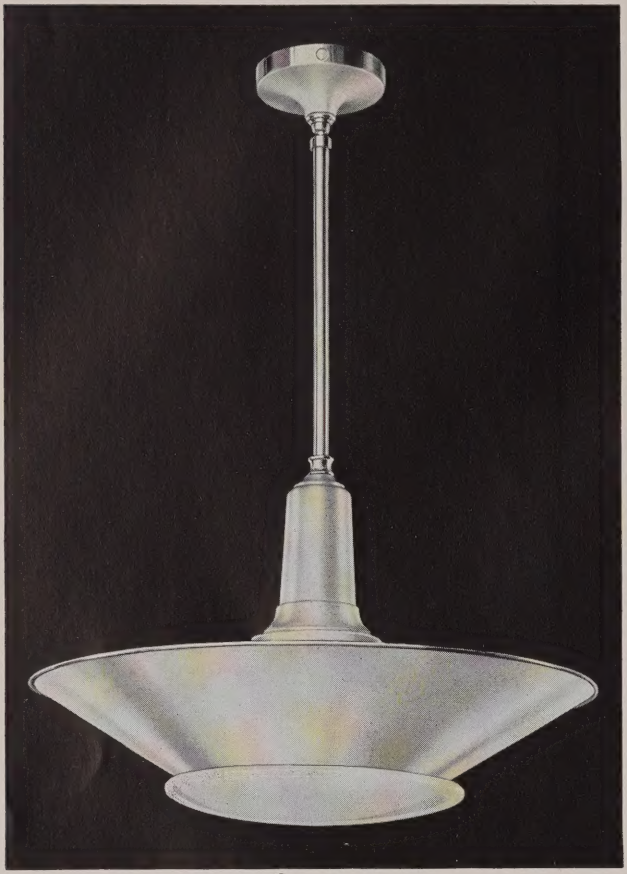


The light distribution is illustrated by these characteristic curves



THE AMOLIER CLEARTOP

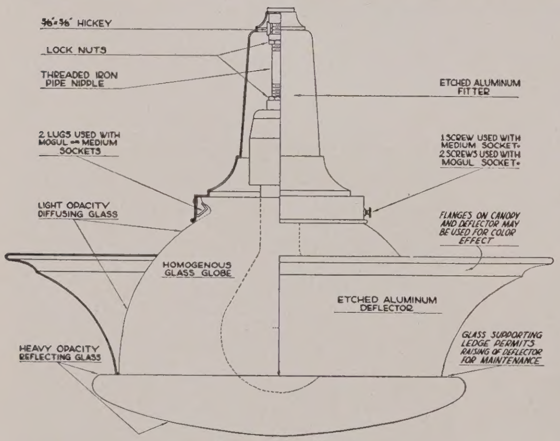
A Totally Enclosed Homogeneous Glass Globe of Dual Opacity for Semi-Indirect Illumination



EXCLUSIVE FEATURES

1. **Totally enclosed Amolier Galax glass globe diffuses the light over a wide area with maximum upward reflection.**
2. **Metal deflector screens the light source.**
3. **Low visible surface brightness values.**
4. **Low maintenance cost.**
5. **The totally enclosed glass globe keeps out all dirt and insects.**
6. **The deflector as well as the bottom of the glass globe has a soft luminous effect when lighted.**
7. **The upper portion of glass is clear for greatest light output.**

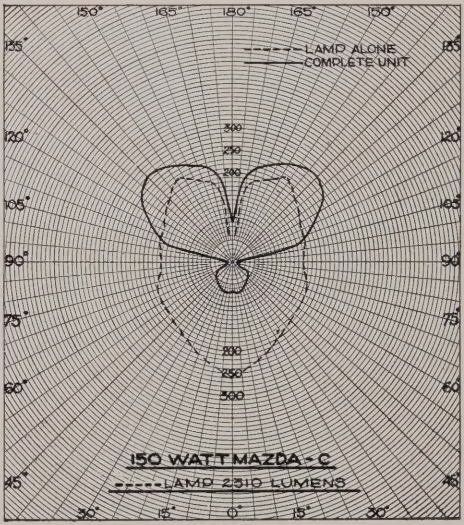
Illustrating the totally enclosed Amolier glass globe with Clear glass top and Dense glass bottom before metal deflector is positioned on the glass supporting ledge.


5/16"=3/8" HICKEY
LOCK NUTS
THREADED IRON PIPE NIPPLE
ETCHED ALUMINUM FITTER
2 LUGS USED WITH MOGUL — MEDIUM SOCKETS
1 SCREW USED WITH MEDIUM SOCKET. 2 SCREWS USED WITH MOGUL SOCKET.
LIGHT OPACITY DIFFUSING GLASS
FLANGES ON CANOPY AND DEFLECTOR MAY BE USED FOR COLOR EFFECT
HOMOGENOUS GLASS GLOBE
ETCHED ALUMINUM DEFLECTOR
GLASS SUPPORTING LEDGE PERMITS RAISING OF DEFLECTOR FOR MAINTENANCE
HEAVY OPACITY REFLECTING GLASS

Assembly Chart

The light distribution of the AMOLIER is illustrated by this characteristic curve.

Surface brightness values of the Galax Glass Bottom range from 1.4 to 2.5 candle power per square inch with a 300W lamp in 12" dia. glass.

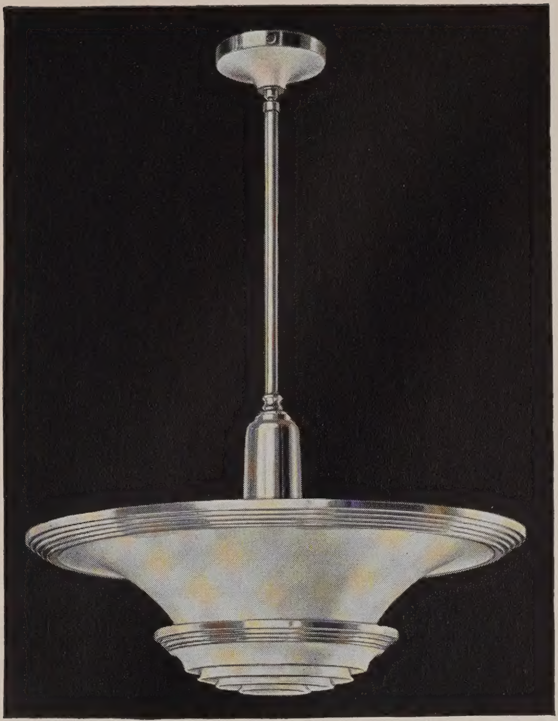


AMOLIER DATA

Chain Pendant Catalog No.	Swivel Stem Catalog No.	Suspension	O. A.	Close Ceiling Catalog No.	O. A.	Deflector Diameter	Glass Size	Type Socket	Wattage
6150	**6151**	30"	36"	**6156**	15"	18"	9" x 4"	Medium	150W
6200	**6201**	30"	37"	**6206**	18"	21½"	12" x 5"	Medium	200W
6250	**6251**	30"	37"	**6256**	18"	21½"	12" x 6"	Mogul	300W
6300	**6301**	30"	39"			26"	14" x 6"	Mogul	500W
1816	**1817**	36"	47"			30"	18" x 8"	Mogul	1000W

Standard Finish: Silvertint.
Optional Finish: Goldtint.

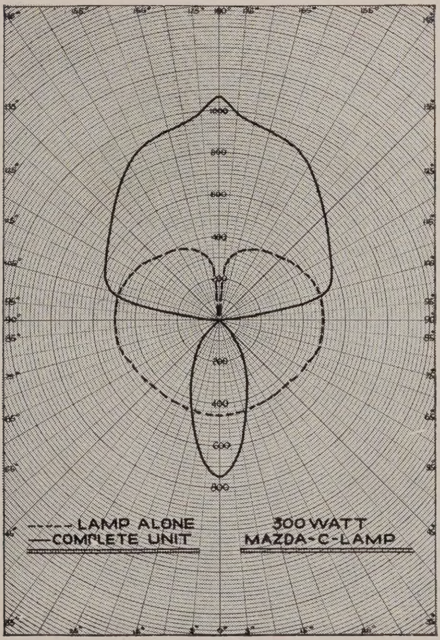
THE LOUVRLIER



Direct-indirect luminous metal bowl, with metal concentric louvres. Downlight spread 35° from the vertical.

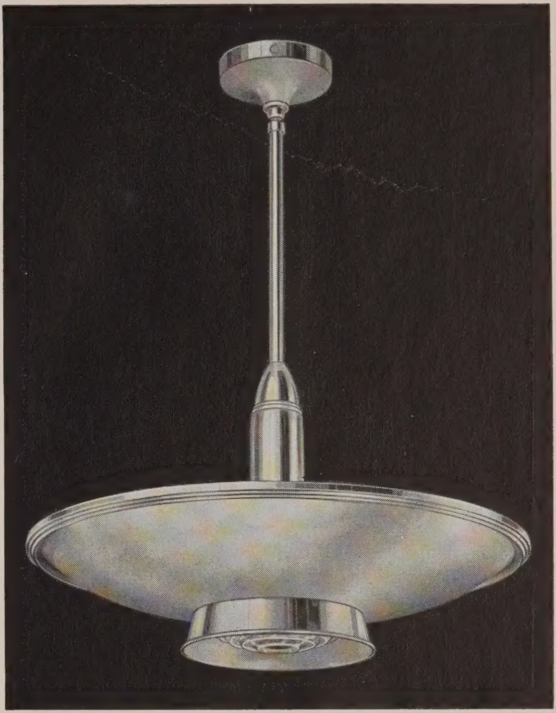
No: 1815S	18″ Dia.	30″ Susp.	36″ O. A.	200W
No. 1758S	22″ Dia.	30″ Susp.	38″ O. A.	300-500W
No. 1803S	30″ Dia.	36″ Susp.	46″ O. A.	750-1000W

Standard Finish: Silvertint—Louvres Matt White.



The light distribution of the LOUVRLIER
is illustrated by this characteristic curve.

THE LENSLIER



Direct-Indirect, using Art Metal "Widelite" glass lens. Downlight spread 45° from the vertical. Opaque metal bowl.

No. 1930	22″ Dia.	30″ Susp.	35″ O. A.	300-500W
No. 2485	30″ Dia.	36″ Susp.	43″ O. A.	750-1000W

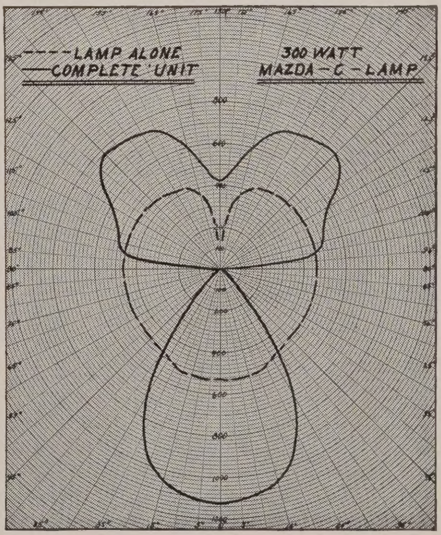
Utilizes a 11¼″ Dia. AMCO Lens.

No. 2486 Same as No. 2485 except furnished with AMCO Coloriser Lens.

Standard Finish: Silvertint.

Optional Finish: Goldtint.

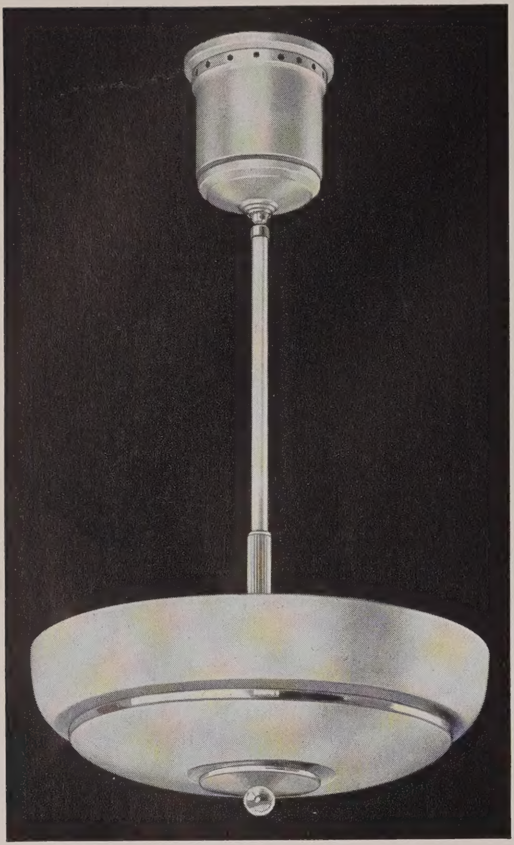
Furnished with a non-absorbing light baffle.

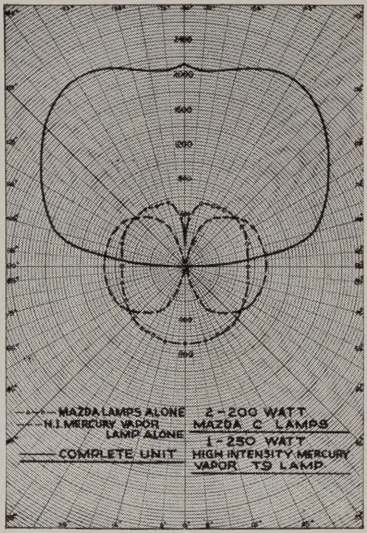


The light distribution of the LENSLIER No. 1930
is illustrated by this characteristic curve.

THE MERCURYLITE

Combines Mercury and Incandescent Lamps




MAZDA LAMPS ALONE
H.I. MERCURY VAPOR LAMP ALONE
COMPLETE UNIT
2-200 WATT MAZDA C LAMPS
1-250 WATT HIGH INTENSITY MERCURY VAPOR T9 LAMP

The light distribution of the MERCURYLITE is illustrated by this characteristic curve.

Mercurylite equipment is furnished wired complete for 250 W. H. I. Mercury Vapor Lamp and 2—200 W. Mazda Lamps. NO LAMPS FURNISHED.

A specifically designed transformer for 110 volt, 60 cycle circuit is the auxiliary furnished complete with wiring diagram.

● The color quality of the light produced by Mercurylite is of "daylight whiteness" because equal lumens of Mercury Vapor light which contain green, blue and yellow color rays are mixed with equal lumens of Mazda light which is a continuous spectrum rich in red, producing a synthetic white.

Mercurylite is by no means a "color matching" light source, but, because of the quality of light and the high lumen output, the Mercurylite is an exceptional artificial light source.

In operation the Mercury Lamp has a high lumen output . . . the 250 W. is equivalent to approximately 450 watts of Mazda. The cost of operation is approximately half the cost of operating Mazda Lamps of the same lumen output.

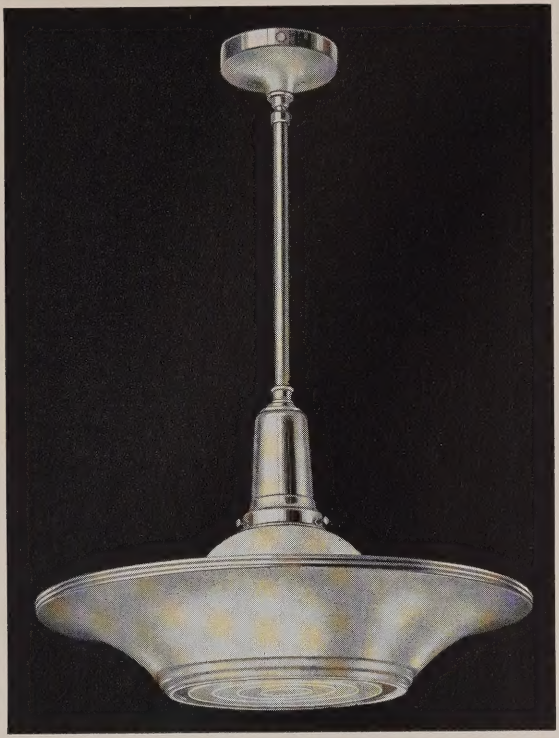
DATA

Cat. No.	Aux. Equip. Mounting	Diameter	Length Overall	Mazda Wattage	H. I. Mercury Wattage	Auxiliary Equipment
9006	Canopy	21½"	**38**	2—200W	250W	110 V, 60 Cycle Transformer

Standard Finish: Silvertint.

This equipment operates only on A. C. current.

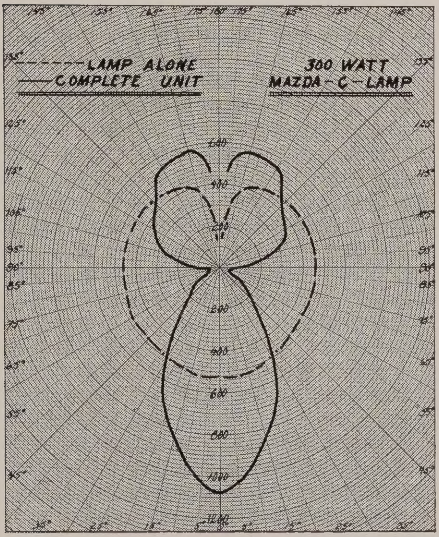
THE RADILUX



Direct-indirect—the inner glass reflector directs a greater percent of light down. Metal concentric bottom louvres. Metal deflector.

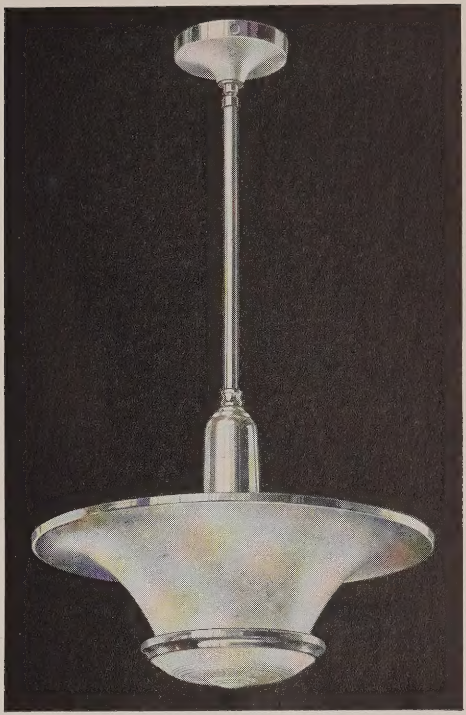
No. 1946 22" Dia. 30" Susp. 34" O. A. 300-500W

Standard Finish: Silvertint—Louvres Matt. White.



The light distribution of the RADILUX is illustrated by this characteristic curve.

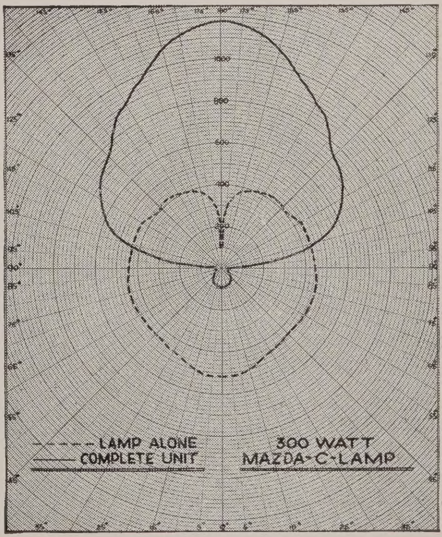
THE EQUALITE



Semi-indirect with luminous bowl and white Monax glass bottom plate.

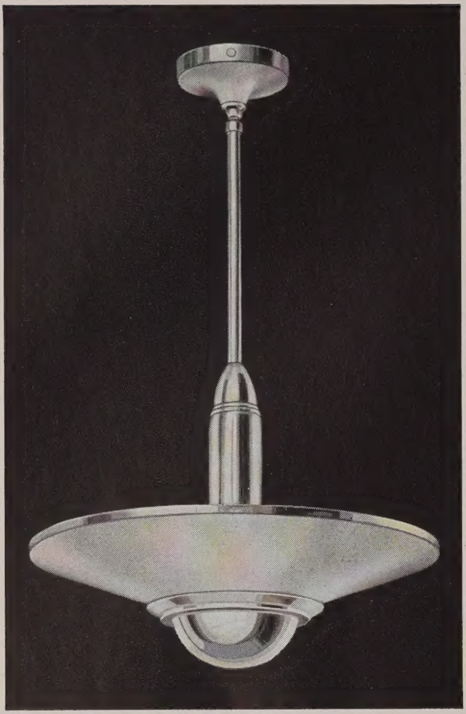
Swivel Stem Pend.	Chain Pend.	Dia.	Susp.	O. A.	Wattage
No. 1732S	**No. 1732**	18"	30"	38"	300-500W

Standard Finish: Silvertint.



The light distribution of the EQUALITE is illustrated by this characteristic curve.

THE REGAL

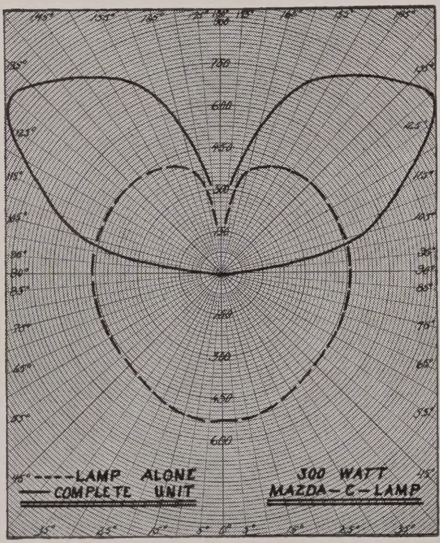


Indirect with luminous metal bowl.

No. 1956 18″ Dia. 30″ Susp. 36″ O. A. 300-500W

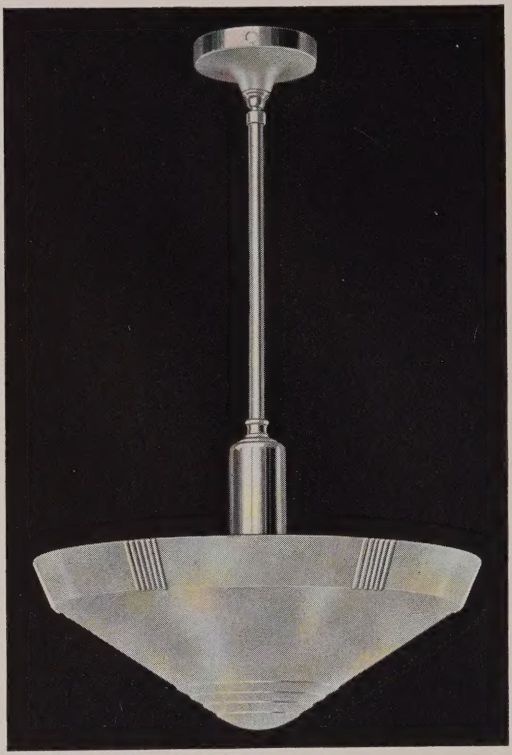
Standard Finish: Silvertint.

Furnished with a non-absorbing light baffle.



The light distribution of the REGAL is illustrated by this characteristic curve.

THE PLASTICLITE

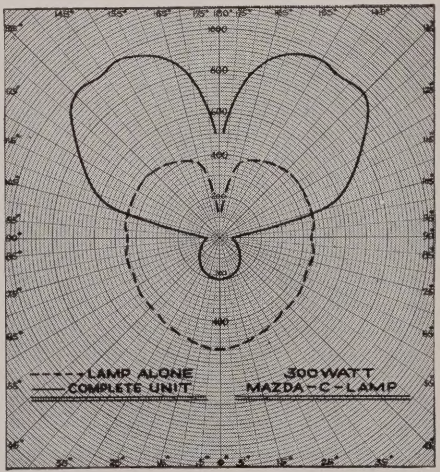


Semi-indirect plastic bowl.

***No. 1860**	18⅝″ Dia.	30″ Susp.	37″ O. A.	300-500W
No. 2409	15¾″ Dia.	30″ Susp.	36″ O. A.	200W

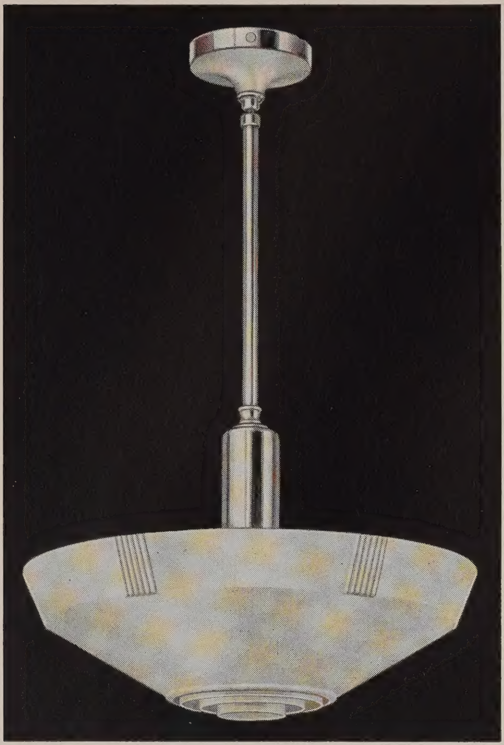
Standard Finish: Silvertint.

*Furnished with a non-absorbing light baffle.



The light distribution of the PLASTICLITE is illustrated by this characteristic curve. SURFACE BRIGHTNESS VALUES of the Plasticlite Bowls range from .8 to 1.98 candle power per sq. in. with a 300W lamp.

THE LOUVRPLASTIC

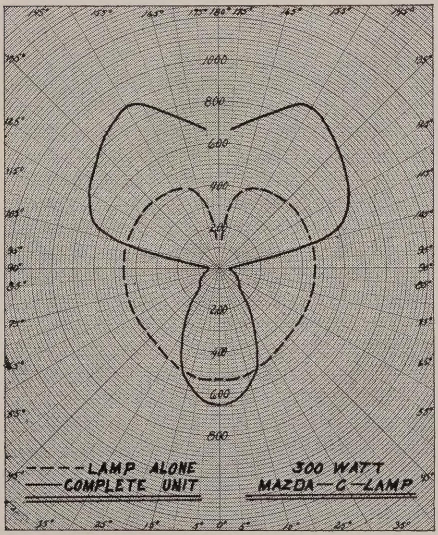


Semi-indirect plastic bowl with concentric metal louvre downlight control.

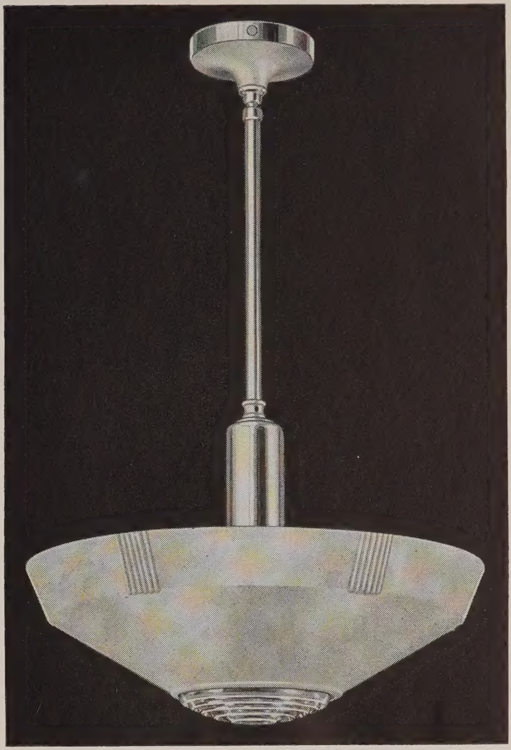
No. 1944 18⅝" Dia. 30" Susp. 36" O. A. 300-500W

Standard Finish: Silvertint—Louvres Matt White.

Furnished with a non-absorbing light baffle.



THE LENSPLASTIC

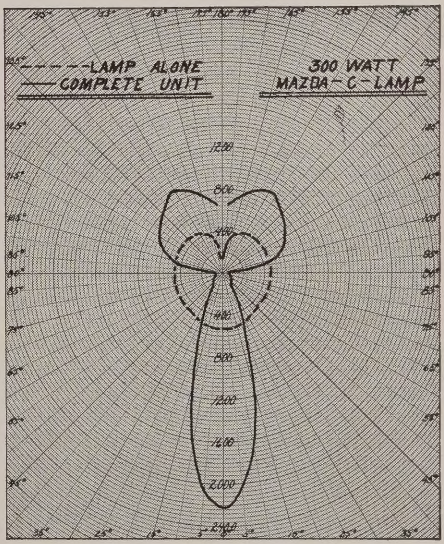


Semi-indirect plastic bowl with Art Metal "Widelite" glass lens downlight control.

No. 1943 18⅝" Dia. 30" Susp. 36" O. A. 300-500W

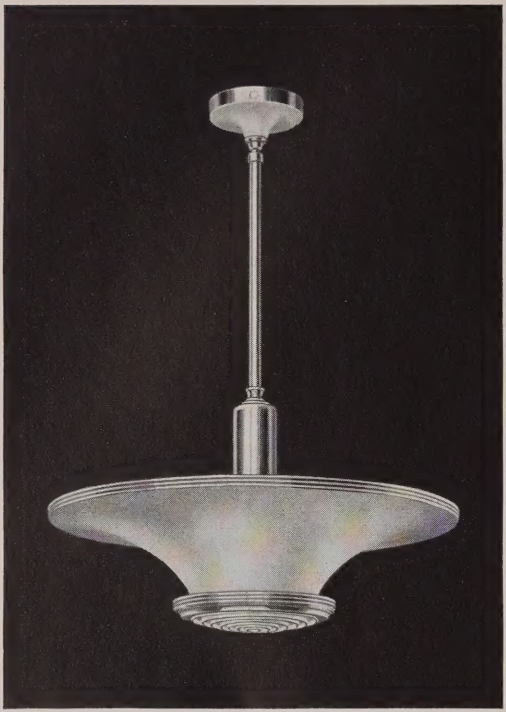
Standard Finish: Silvertint.

Furnished with a non-absorbing light baffle.



The light distribution curves illustrate the control of the light up for semi-indirect general illumination and directly down for concentrated localized lighting . . . The Direct downlighting is controlled by concentric metal louvres or by the Art Metal "Widelite" glass lens.

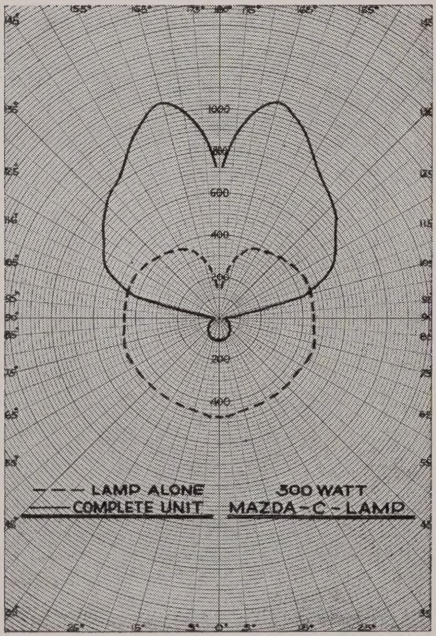
THE STREAMLITE



Semi-indirect luminous bowl with concentric lined white Monax glass bottom plate.

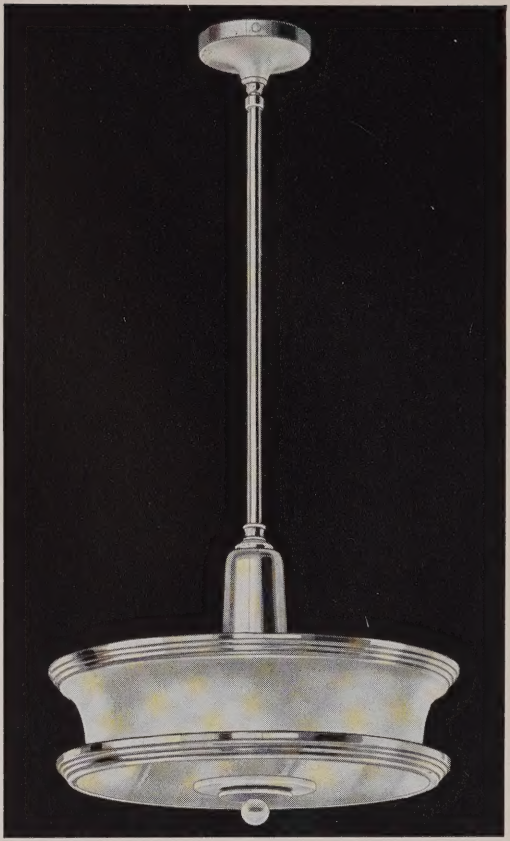
No. 1863 22″ Dia. 30″ Susp. 36″ O. A. 300-500W

Standard Finish: Silvertint.



The light distribution of the STREAMLITE is illustrated by this characteristic curve.

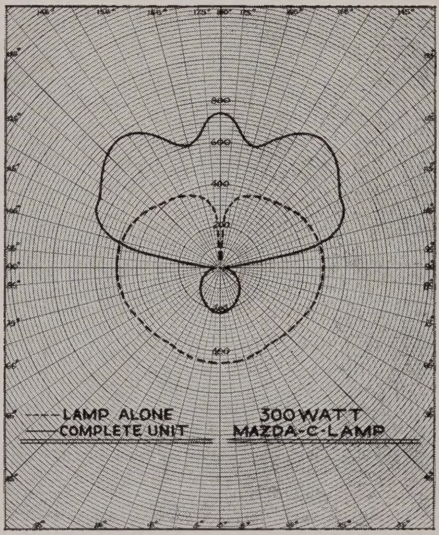
THE EQUALIER



Semi-indirect luminous drum with a double thickness flashed opal bottom glass with a 5½″ dia. louvred metal plate and crystal ball.

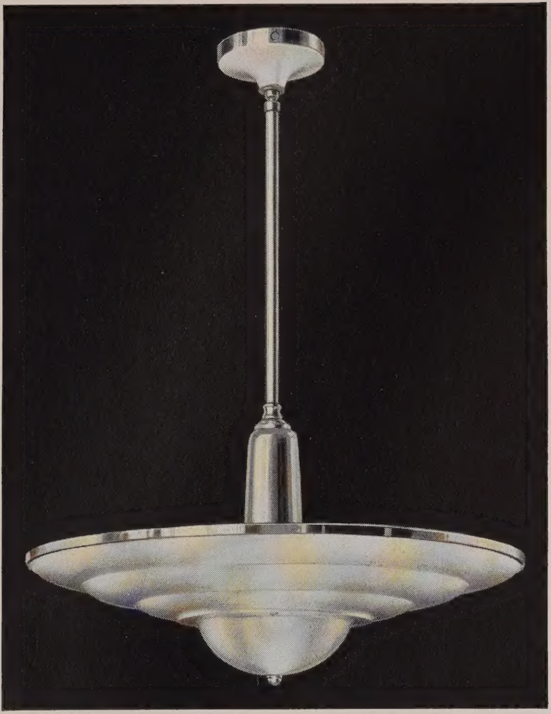
No. 1830S 18″ Dia. 30″ Susp. 36″ O. A. 300W

Standard Finish: Silvertint.
Optional Finish: Goldtint.



The light distribution of the EQUALIER is illustrated by this characteristic curve.

THE DISTRIBUTOR



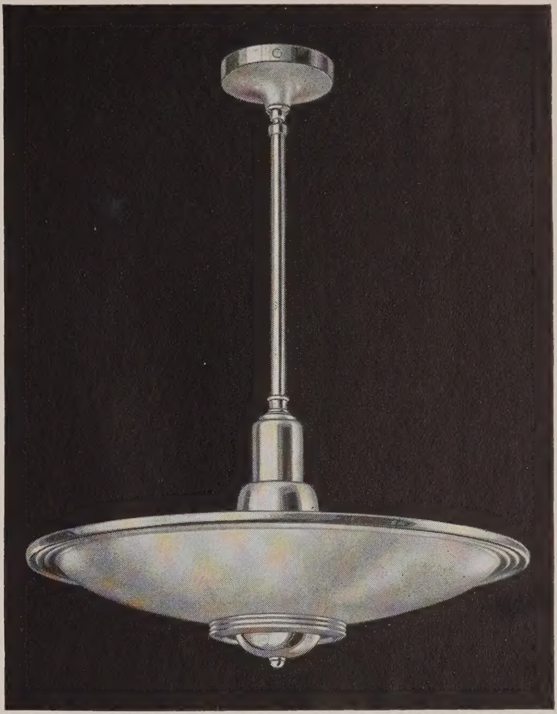
Indirect shallow metal bowl for "PS" lamps only.

Swivel Stem Pend.	Chain Pend.	Dia.	Susp.	O. A.	Wattage
No. 1733S	**No. 1733**	22″	30″	36″	300-500W
No. 1761S	**No. 1761**	18″	30″	35″	300W
No. 1762S	**No. 1762**	18″	30″	35″	200W
No. 1802S		30″	36″	45″	750-1500W

Standard Finish: Silvertint.

Alzak finish obtainable on 18″ and 22″ dia. only.

THE BROADCASTER for Bipost Lamp

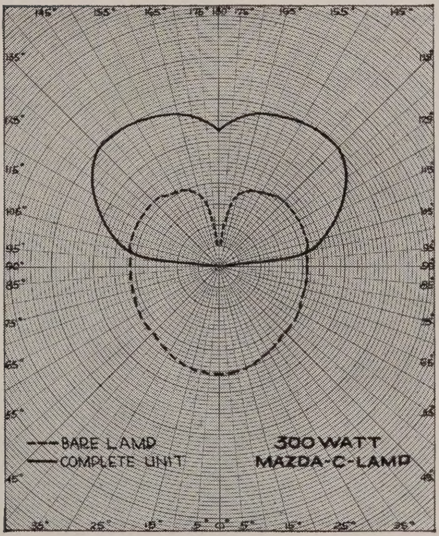


Indirect shallow metal bowl with luminous bottom effect. For Bipost Lamps only.

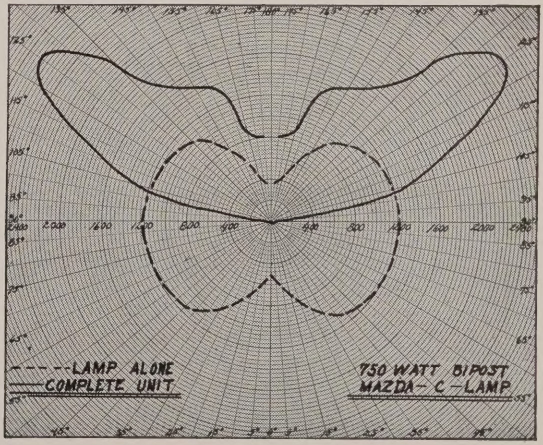
No. 1947 22″ Dia. 30″ Susp. 36″ O. A. 750-1000W Bipost

Standard Finish: Silvertint.

Furnished with a non-absorbing light baffle.



The light distribution of the DISTRIBUTOR is illustrated by this characteristic curve.

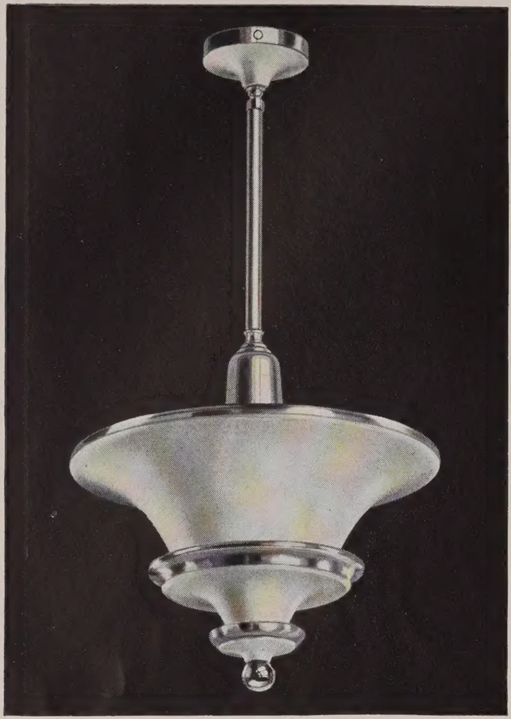


The light distribution of the BROADCASTER is illustrated by this characteristic curve.

THE MURALIER

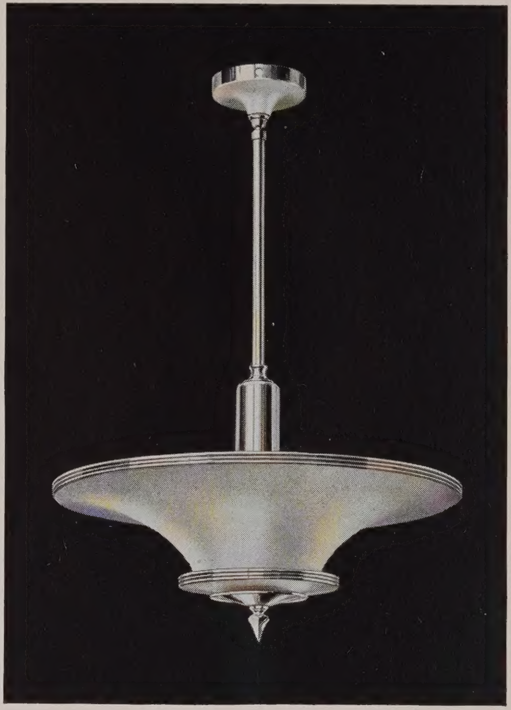
Reflects Colored Light On the Outside Surface Of the Fixture Changeable At Will . . . The Projected Light Is White

Muralier light sources supply illumination that is sparkling white plus the added feature of color control . . . changeable transmitted color that is confined within the area of the fixture.



(Left) **MURALIER STANDARD No. 8028**

(Right) **MURALIER ECLIPSE No. 1862**



DATA

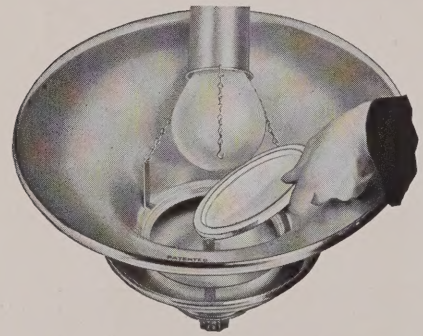
No. 8018	Chain Pendant	18″ Dia.	30″ Suspension	41″ O. A.	Mogul	300-500W
No. 8028	Swivel Stem Pendant	18″ Dia.	30″ Suspension	41″ O. A.	Mogul	300-500W
No. 1862	Swivel Stem Pendant	22″ Dia.	30″ Suspension	38″ O. A.	Mogul	300-500W

Standard Finish: Silvertint. **Optional Finish:** Goldtint.

GLASS COLOR FILTER DATA

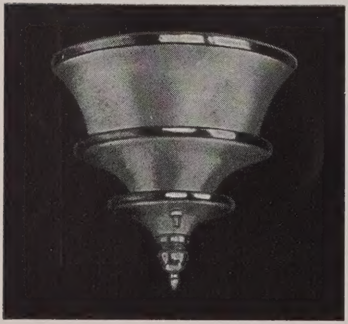
Muralier Bowl Diameter	Filter Diameter	Catalog No. Red Filter	Catalog No. Amber Filter	Catalog No. Green Filter	Catalog No. Blue Filter
22″	5″	**8508**	**8509**	**8510**	**8511**
18″	6⅜″	**8500**	**8501**	**8502**	**8503**

Catalog No. 8517—A combination filter in which is grouped segments of the four primary colors to give Muralier an alluring chromatic effect, is available for 18″ Bowl Diameter Fixtures only.



HOW MURALIER COLOR CONTROL IS ACCOMPLISHED

Select the color filter you want . . . slip it into place . . . light Muralier and it is tinted on the surface of the fixture with the color you choose. Color filters are obtainable in Amber, Green, Red, Blue or a combination of these four colors into one chromatic filter. MURALIERS are fully protected by patents.



No. M 1402

MURALIER WALL POCKET DATA

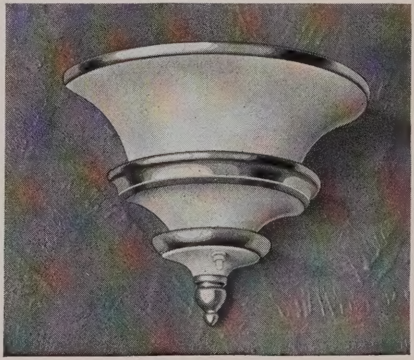
Cat. No.	Dia.	Ex.	O. A.	Wired	Wattage
M8001	12″	5¾″	10″	Med.	100W
M1402	9″	4″	8¼″	Med.	60W

Wired complete with switch.

Finish: Silvertint.

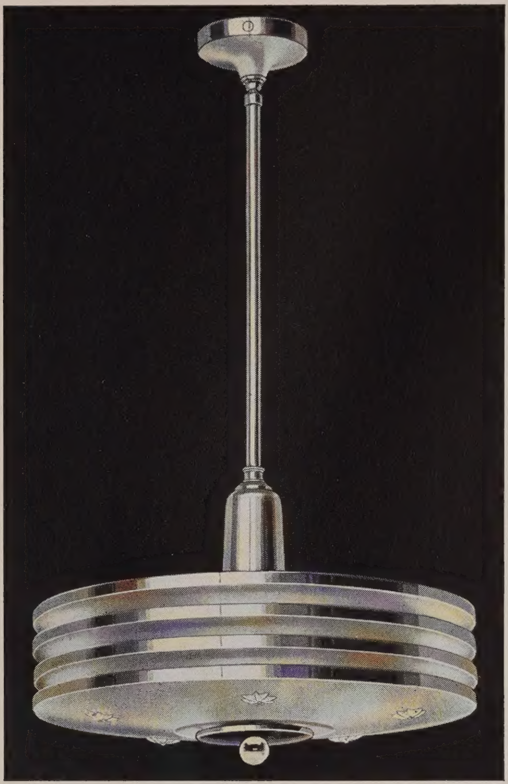
GLASS COLOR FILTER DATA FOR EITHER M8001 OR M1402

No. 8518—Red Color Filter
No. 8519—Amber Color Filter
No. 8520—Green Color Filter
No. 8521—Blue Color Filter



No. M 8001

THE MURALIER FORMALITE



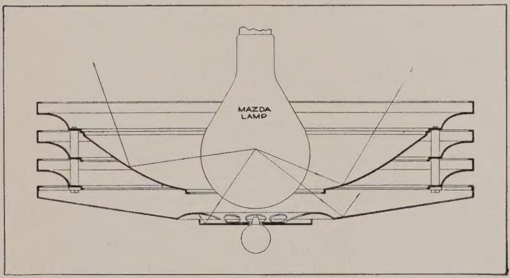
Indirect with luminous louvres and crystal star bottom decoration . . . Color control feature allows outside surface of louvred bowl to be tinted red-green-amber-blue or chromatic . . . changeable at will.

Swivel Stem Pend.	Chain Pend.	Dia.	Susp.	O. A.	Wattage
No. 1786S	**No. 1786**	15¼″	30″	36″	200-300W
No. 1787S	**No. 1787**	20″	30″	37″	300-500W

Standard Finish: Silvertint.
Optional Finish: Goldtint.

Glass Color Filter Data for Muralier Formalite
Either 15¼″ or 20″ Dia. Size.

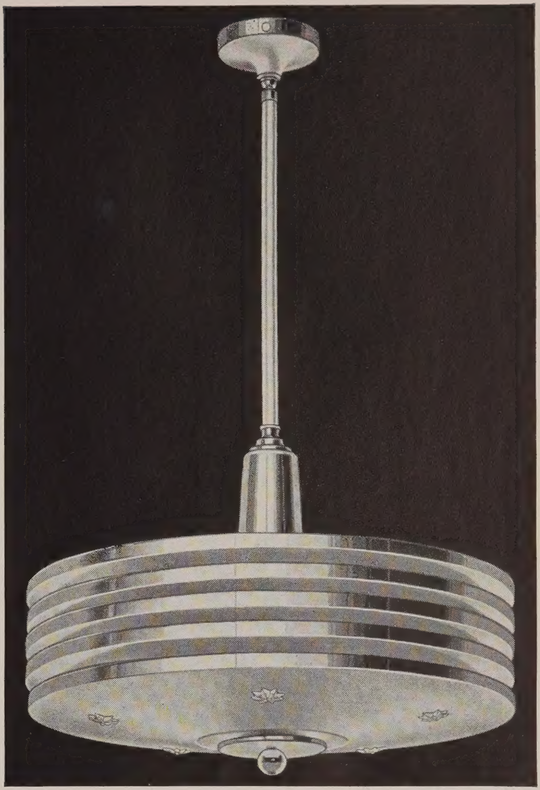
No. 8500	Red	Color Filter
No. 8501	Amber	Color Filter
No. 8502	Green	Color Filter
No. 8503	Blue	Color Filter
No. 8517	Chromatic	Color Filter



Cross Section Drawing

This cross sectional drawing and characteristic curve are descriptive of both the above Muralier Formalite and the Formalier.

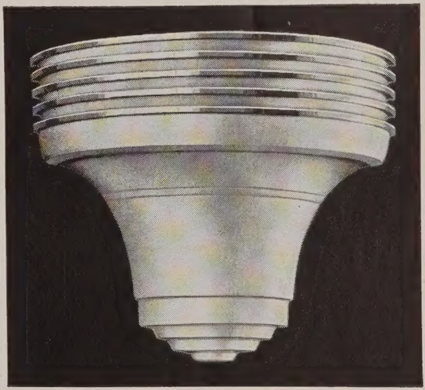
THE FORMALIER



Indirect with luminous louvres. Crystal star bottom decoration. No color control.

No. 1783S 24″ Dia. 36″ Susp. 45″ O. A. 750-1000W

Standard Finish: Silvertint.
Optional Finish: Goldtint.



Luminous Louvred Wall Pocket

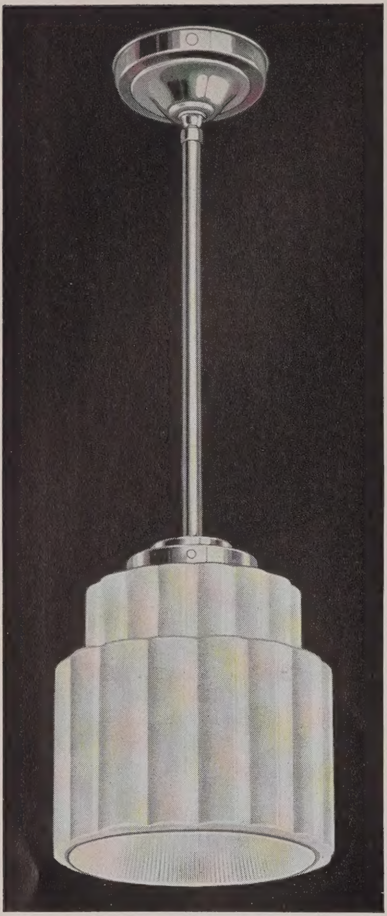
No. 1785 15½ Dia. 12½ O.A. 500W

No switch furnished.

Finished: Silvertint.

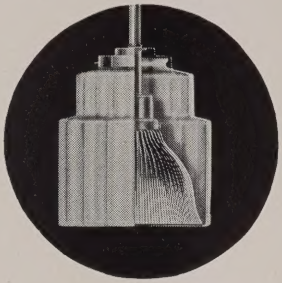
No Color Control.

THE HALE UNIT—DIRECT LIGHTING



No. 1660

No. 1660 L with Concentric Louvres

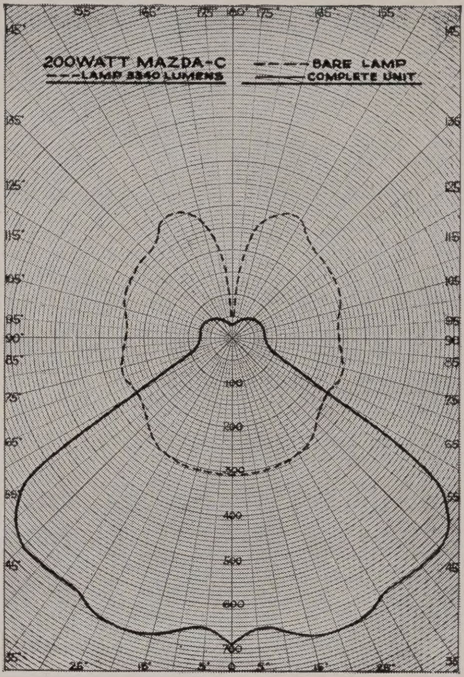


(PATENTED)

The above illustration shows the construction of the Hale Unit. The outer glass globe, which is a highly diffusing glass, rests on a stationary and correctly positioned support. This glass has a standard 5″ fitter for the 200 W. size. It can easily be raised from its support for maintenance.

The inner prismatic glass reflector is held in position with a standard 3¼″ fitter.

The position of the glass support is determined by the focal position of the Mazda Lamp and is made rigid in the construction of the fixture to prevent any variance in the focal position—thus always assuring correct operation.



The light distribution of the HALE UNIT is illustrated by this characteristic curve.

SURFACE BRIGHTNESS VALUES on the side of the outer Monax Glass range from .2 to .6 Candle Power per square inch with a 200W Lamp.

The HALE UNIT is designed to give quantity illumination for effective down lighting. The fact that the HALE UNIT concentrates 85% of the light down and 15% upward solves the lighting problem economically for direct illumination and decidedly increases over-all efficiencies. This scientific control of light is due to special patented design and construction. The exterior light diffusing opal glass provides general illumination and the inner prismatic reflector provides the efficient, direct illumination.

Concentric directional louvres are available for the Hale Unit illustrated above—merely add the letter "L" to the standard catalog number when ordering if HALE UNIT is desired complete with concentric louvres.

HALE UNIT DATA

Listing is Complete Including Prismatic Reflector

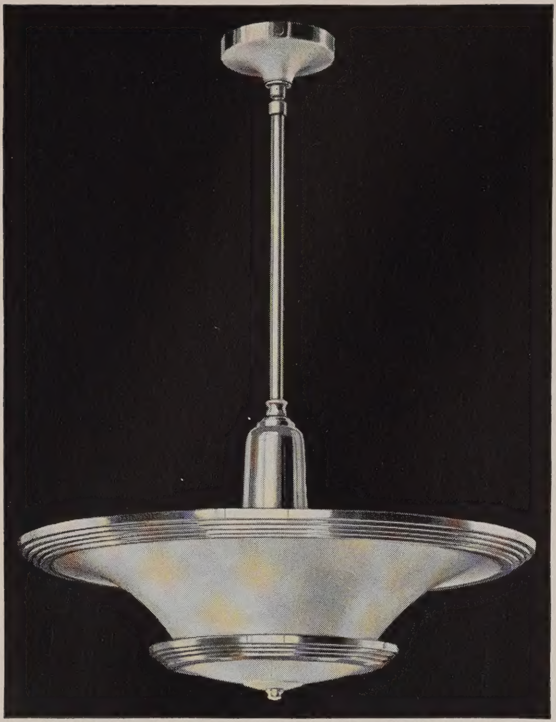
Cat. No.	Type	Length Overall	Wired	Wattage
1660	Swivel Stem Pend.	36″	Medium	200

1660L—Same as above except with Concentric Matt White Metal Bottom Louvres.

Outside glass 5″ fitter, 12½″ O. A., Maximum Diameter 11″. Innerreflector 3¼″ fitter, 7⅜″ O. A., Maximum Diameter 9¾″.

Standard Finish: Pewter.

THE PREMIER

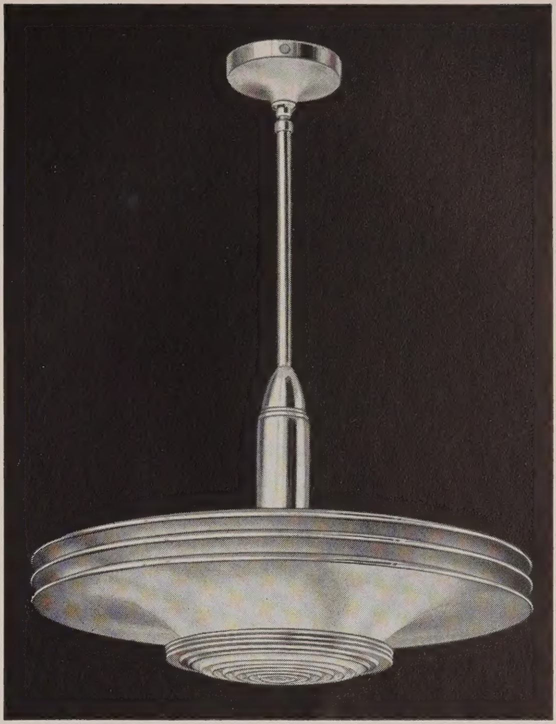


Indirect Luminous Metal Bowl.

Swivel Stem Pend.	Chain Pend.	Dia.	Susp.	O. A.	Wattage
No. 1813S	**No. 1813**	18″	30″	35″	200W
No. 1759S	**No. 1759**	22″	30″	37″	300-500W
No. 1801S	**No. 1801**	30″	36″	45″	750-1500W

Standard Finish: Silvertint.

THE MODERNLUX



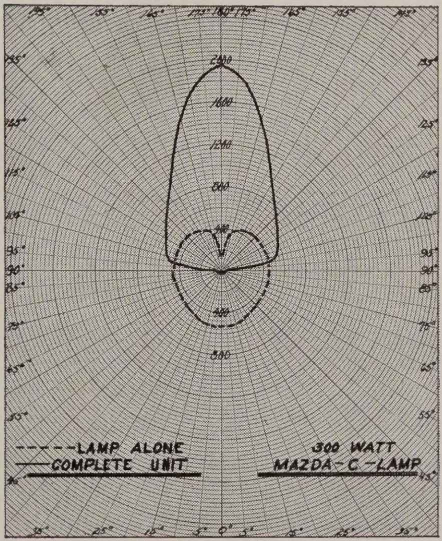
Semi-indirect luminous louvres with concentric lined white Monax glass bottom plate.

No. 1953 22″ Dia. 30″ Susp. 36″ O. A. 300-500W

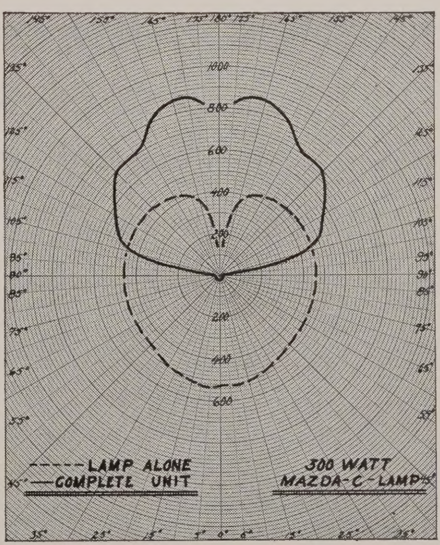
Standard Finish: Silvertint.

Optional Finish: Goldtint.

Furnished with a non-absorbing light baffle.

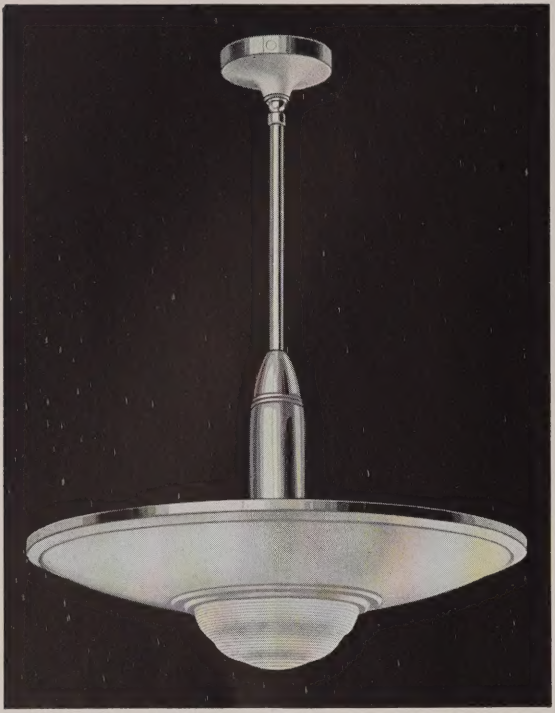


The light distribution from the PREMIER is illustrated by this characteristic curve.



The light distribution of the MODERNLUX is illustrated by this characteristic curve.

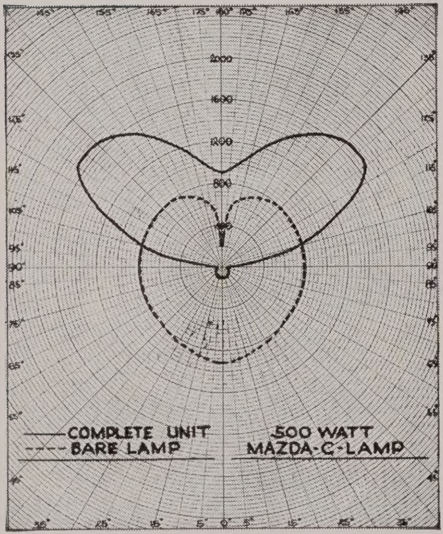
THE AERIAL



Semi-indirect with luminous Denax glass cup in bottom.

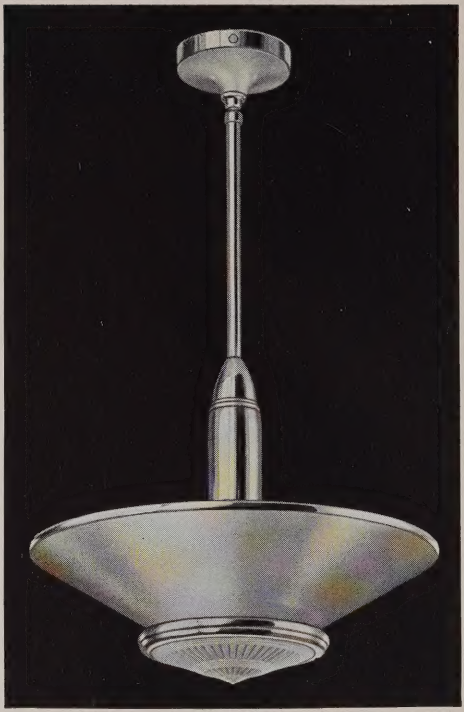
No. 1781S	18″ Dia.	30″ Susp.	35″ O. A.	200-300W
No. 1812S	18″ Dia.	30″ Susp.	35″ O. A.	300W
No. 1782S	22″ Dia.	30″ Susp.	36″ O. A.	300-500W

Standard Finish: Silvertint.
Optional Finish: Goldtint.



The light distribution of the AERIAL is illustrated by this characteristic curve.

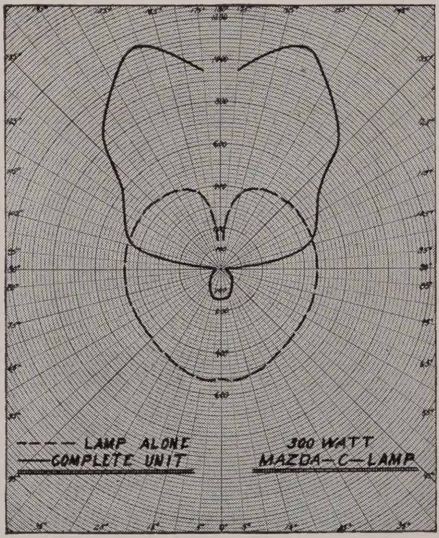
THE CONILIER



Semi-indirect with luminous bowl and conical white Monax glass bottom plate.

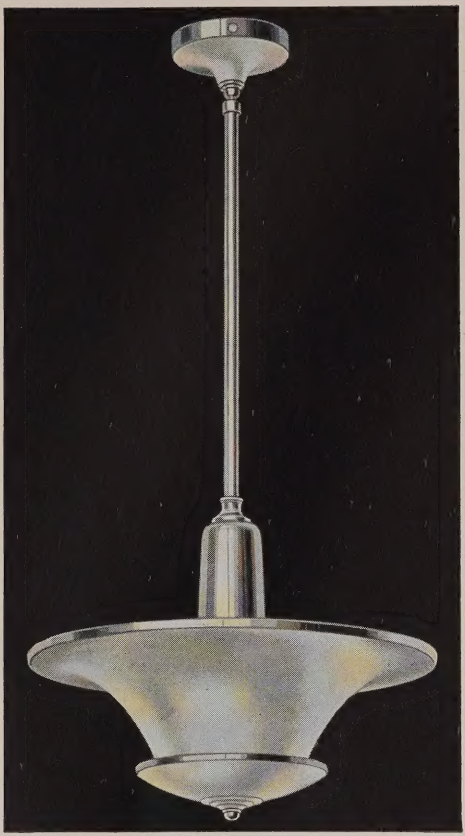
No. 1949	18″ Dia.	30″ Susp.	36″ O. A.	300-500W

Standard Finish: Silvertint.



The light distribution of the CONILIER is illustrated by this characteristic curve.

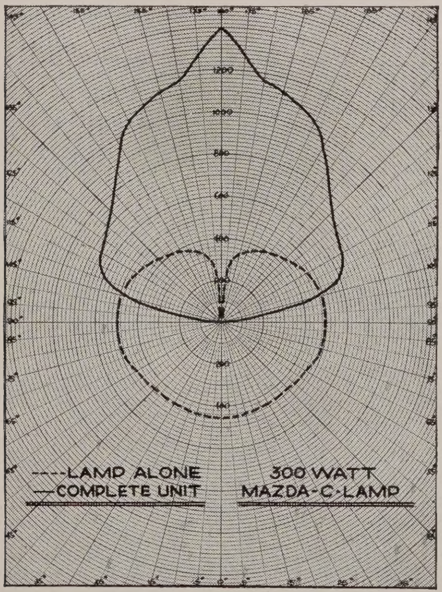
THE PARLUX



Indirect with luminous metal bowl.

Swivel Stem Pend.	Chain Pend.	Dia.	Susp.	O. A.	Wattage
No. 1788S	**No. 1788**	18″	30″	38″	300-500W

Standard Finish: Silvertint.



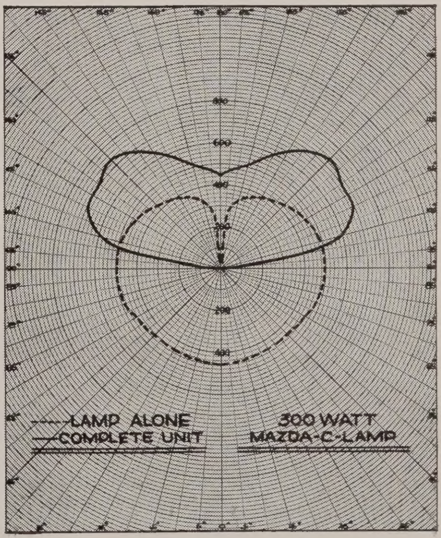
The light distribution of the PARLUX is illustrated by this characteristic curve.

THE ULTRALITE

All metal indirect with luminous ring on bottom surface.

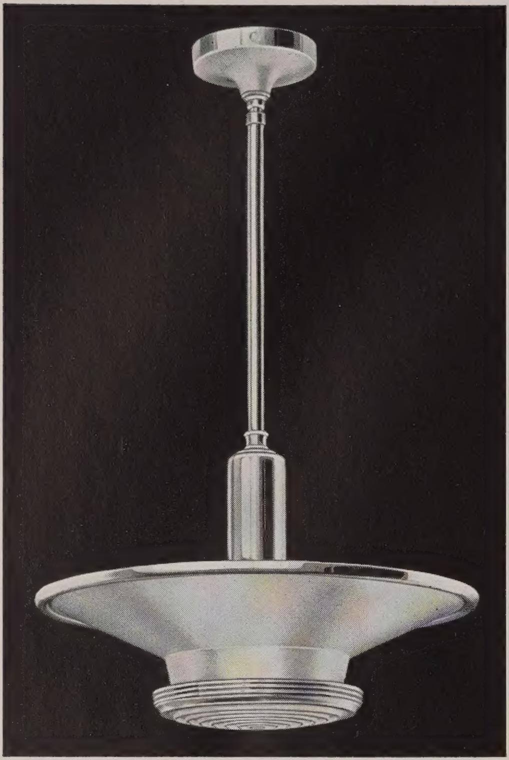
No. 1780S 20″ Dia. 30″ Susp. 36″ O. A. 300-500W

Standard Finish: Silvertint.
Optional Finish: Goldtint.



The light distribution of the ULTRALITE is illustrated by this characteristic curve.

THE AEROLUX

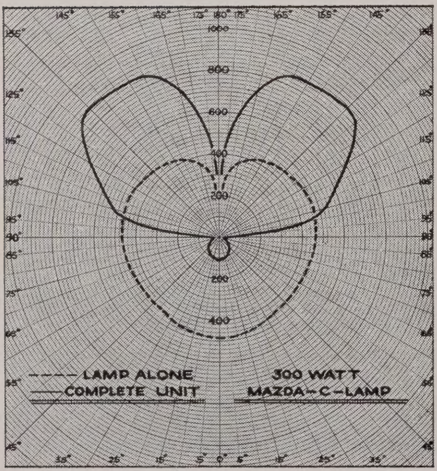


Semi-indirect luminous bowl with concentric lined white Monax glass bottom plate.

No. 1915	18″ Dia.	30″ Susp.	36″ O. A.	300-500W

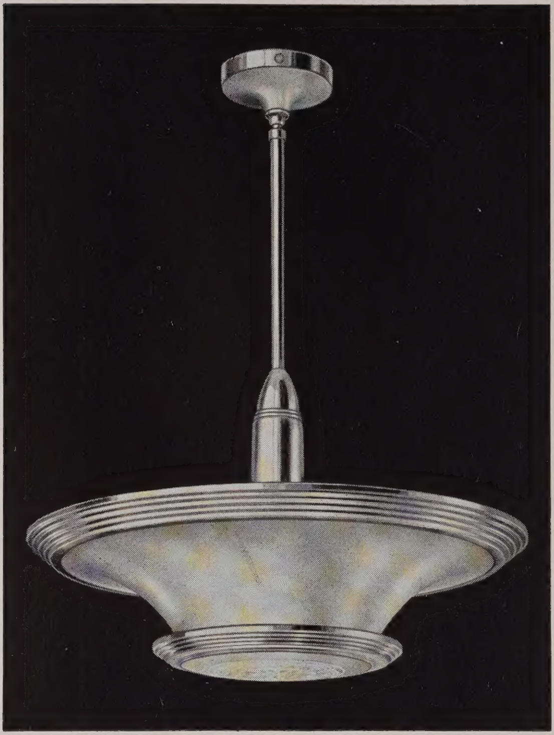
Standard Finish: Silvertint.

Furnished with a non-absorbing light baffle.



The light distribution of the AEROLUX is illustrated by this characteristic curve.

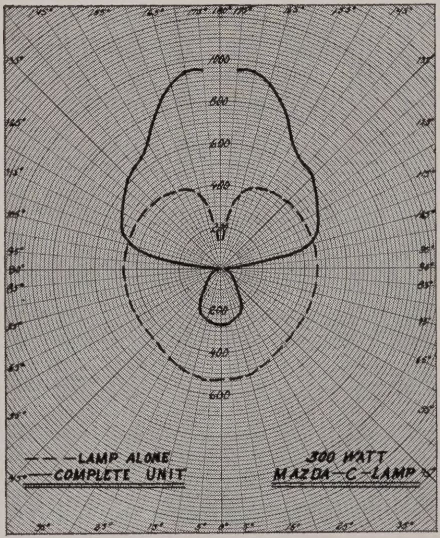
THE ROYALIER



Semi-indirect luminous bowl with embossed pebbled glass bottom plate.

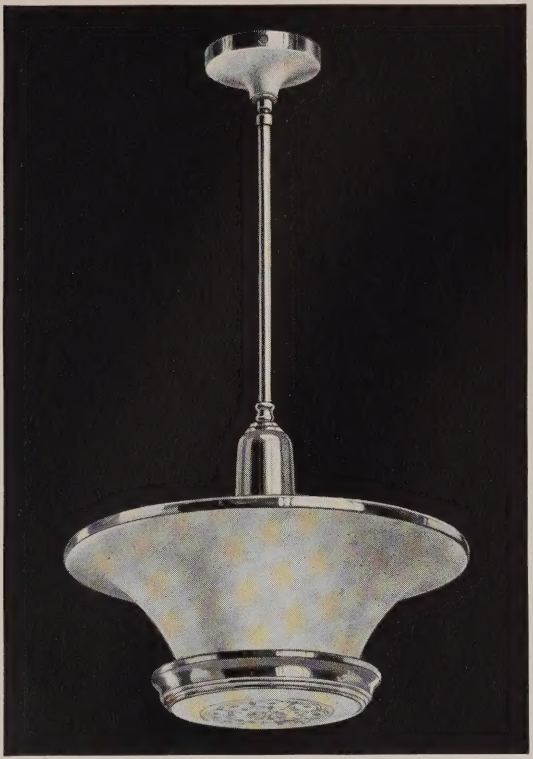
No. 1948	22″ Dia.	30″ Susp.	36″ O. A.	300-500W

Standard Finish: Silvertint.



The light distribution from the ROYALIER is illustrated by this characteristic curve.

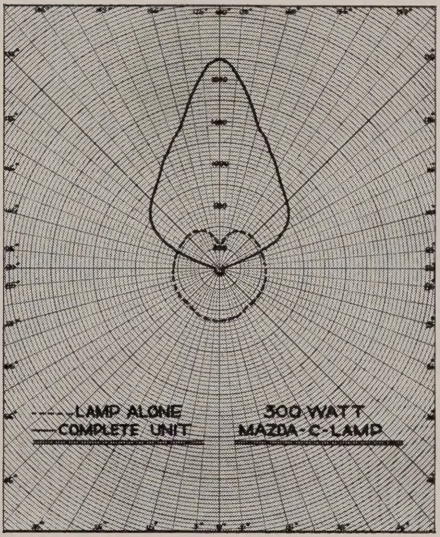
THE REGENT STANDARD



Semi-indirect luminous bowl with embossed Denax glass bottom plate.

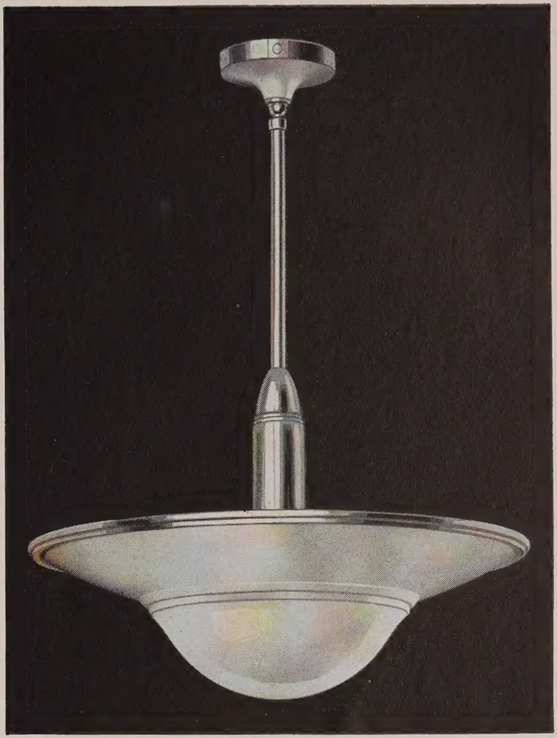
No. 928 18″ Dia. 30″ Susp. 37″ O. A. 300-500W

Standard Finish: Silvertint.



The light distribution of the REGENT Standard is illustrated by this characteristic curve.

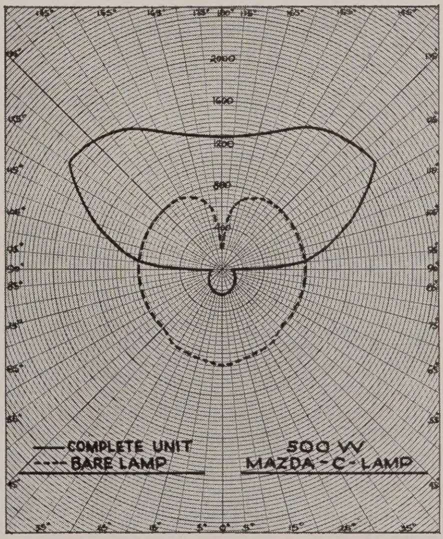
THE SUPERLUX



Semi-indirect with Denax glass bowl.

No. 1805S 22″ Dia. 30″ Susp. 36″ O. A. 300-500W

Standard Finish: Silvertint.

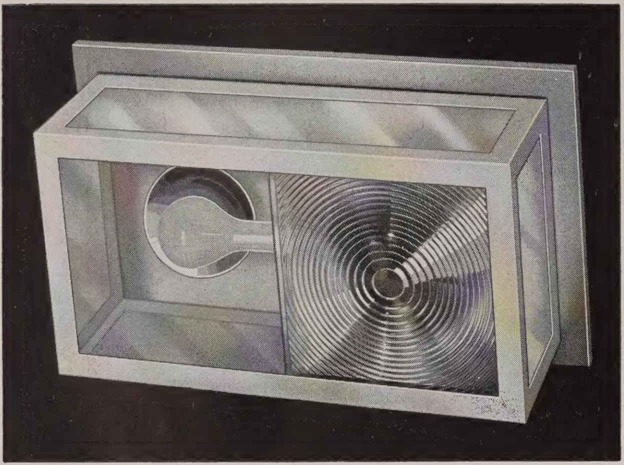


The light distribution of this SUPERLUX is illustrated by this characteristic curve.

THE ART METAL OPTICAL SYSTEM OF DIRECT ILLUMINATION

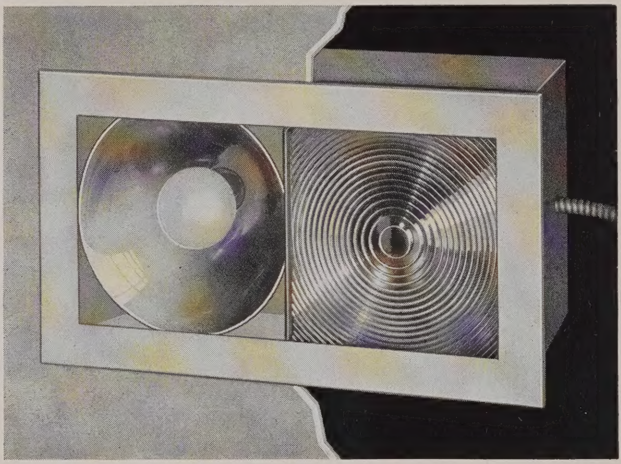
● The Art Metal Optical System of Direct Illumination utilizes the AMCO Lens which is an optically corrected plano-convex lens designed on the Fresnel principle and a coordinating scientifically contoured specular Alzak aluminum reflector. These elements are housed in a steel box which is either recessed into the ceiling with the lens flush to the ceiling, or is mounted directly on the ceiling, as illustrated.

Higher values of illumination are obtainable with this system, as the light of the lamp is directed into predetermined areas by a precisely formed reflector and a refracting lens of finest quality glass. A further advantage of this system is that the illumination is not dependent on the color of the ceiling or walls. This produces a lighting system with a high coefficient of utilization.



EXPOSED UNIT No. 468

Exterior view of two light unit showing one lens removed which illustrates the optical assembly characteristic of the Art Metal Optical System with horizontal lamp position.



RECESSED UNIT No. 451

Exterior view of recessed two light unit showing one lens and the ceiling partially removed which illustrates the optical assembly characteristic of the Art Metal Optical System for vertical lamp position.

FOUR REGULATED TYPES OF ILLUMINATION ARE AVAILABLE WITH THE ART METAL OPTICAL SYSTEM OF DIRECT ILLUMINATION

1. **GENERAL LIGHTING**: An even spread of illumination.
2. **ACCENT LIGHTING**: Higher values of illumination to attract attention to special display areas.
3. **COMBINATION LIGHTING**: An even spread of illumination plus accent lighting. This is obtained by laying out a basic system of general illumination and then adding accent lighting in specific locations.
4. ***HIGHLIGHTING**: A precisely directed beam of light illuminating only the object of interest.

*Effective Highlighting (offset positioning of the lamp) requires special engineering of individual elements to insure proper coverage of displays. Information and detail for these special applications should be forwarded our Illuminating Engineering Department for layout, as beam sizes and direction are specifically set in the equipment.

METHODS FOR ILLUMINATION CALCULATION

General illumination values for The Art Metal Optical System may be computed by the Lumen Method of Calculation. This method indicates a general average figure meeting most requirements. The formula for the Lumen Method is given on pages 5, 6 and 7. The pertinent information necessary such as the Coefficients of Utilization is given on page 10; the Room Indices are given on page 7.

The Point by Point Method of Calculation should be used for accurate figures of illumination. The formula for this method of calculation and all necessary data thereto is given on pages 10 and 11. The Candlepower values are given on pages illustrating the various units. This method must be used for computing the intensity of the necessary candlepower beam or the illumination value obtainable with Accent Lighting or Highlighting.

THE ART METAL OPTICAL SYSTEM OF DIRECT ILLUMINATION

The units of this system are adaptable to any style of architecture. They create a cool effect and become an integral part of a room. They harmonize with all interiors and lend spaciousness and dignity to the surroundings.

This system is available with either Exposed or Recessed types of units. They give permanent performance and have unlimited life. The units are reasonably dust-tight so that maintenance is reduced to relamping.

The Recessed type unit consists of the reflector, socket, and lamp housed in a steel box. This box is recessed into the ceiling with only the lens and finishing trim apparent on the ceiling.

The Exposed type unit is mounted directly to the ceiling, and is composed of the same elements as comprise the Recessed unit. This type gives illumination on the ceiling through the Flashed Opal Glass side panels. These units are particularly adaptable to re-lighting installations.

THE EXCLUSIVE FEATURES OF AMCO *Colorizer Lenses . . .*

A PATENTED COLOR TREATMENT SUPPLEMENTING THE AMCO CLEAR CRYSTAL LENS

- AMCO Coloriser Lenses are plano-convex Fresnel lenses with the vertical steps or risers treated with a translucent color. The Coloriser Lens has the function of softening or diffusing spilled-light at high angles from the nadir.

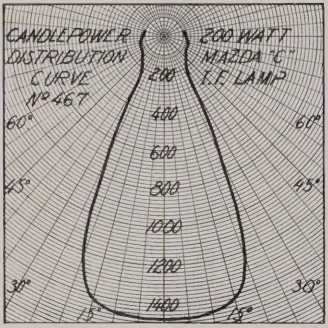
The softening of spilled-light is accomplished through absorption or diffusion by the Coloriser steps, producing a minimum low surface brightness on the lens. This absorption or diffusion does not materially affect the main beam candle power. The AMCO Coloriser Lens transmits the light in the beam undistorted and unmodified.

A unique and pleasing appearance in direct lighting is produced with the application of color on the steps or risers of the lens. This allows the architect or decorator to harmonize with interior color schemes with no appreciable sacrifice in efficiency to the lighting system. Subtle psychological effects that interiors may require can be obtained with AMCO Coloriser Lenses.

The standard color of AMCO Coloriser Lenses is Ivory. Other colors—Golden Buff, Deep Yellow, Bright Red, Ultra Blue or White and Black are available (but not stocked). Coloriser Lenses in Platinum or Gold can be had on special order. There is a slight additional charge for colors other than standard.

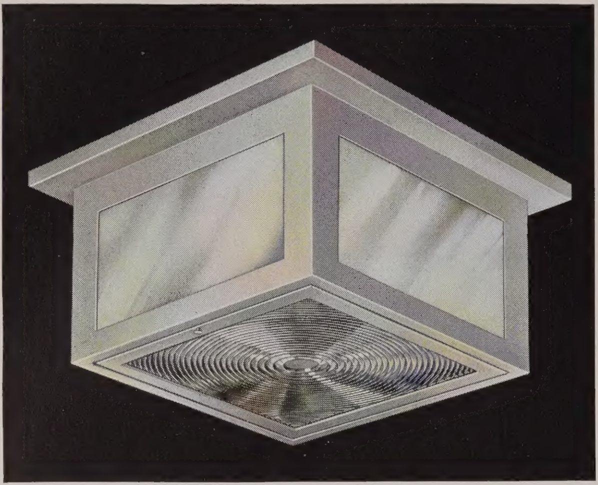
- **A STANDARD SPECIFICATION COVERING THE ART METAL OPTICAL SYSTEM OF DIRECT ILLUMINATION WILL BE FURNISHED ON REQUEST.**

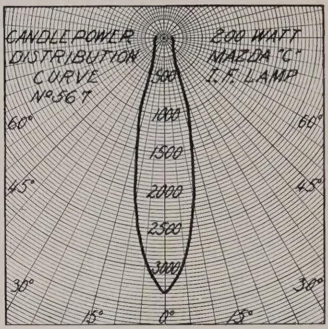
EXPOSED UNITS—12" AMCO LENSES



CANDLEPOWER DISTRIBUTION CURVE UNIT No. 467:

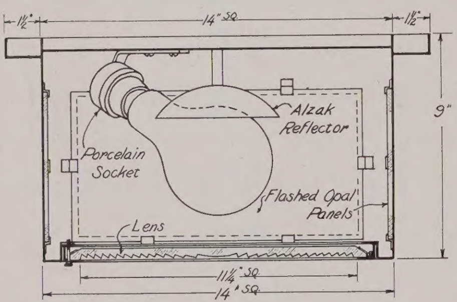
This candlepower distribution curve was made with a One-light unit using a 200 Watt I. F. Lamp. To arrive at candlepower values for 300 Watt Medium Base Lamp multiply by 1.62. Illumination values of the Two-light and Four-light units are respectively twice and four times that value derived from the One-light unit. The distribution of light is extremely wide. The spacing of the units should not exceed one and one quarter times the mounting height above the working plane. This type of unit is for general illumination.




CANDLEPOWER DISTRIBUTION CURVE No 567
200 WATT MAZDA "C" I.F. LAMP
500
1000
1500
2000
2500
3000
60°
60°
45°
45°
30°
30°
15°
0°
15°

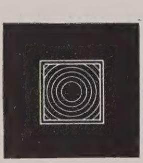
CANDLEPOWER DISTRIBUTION CURVE UNIT No. 567:

This candlepower distribution curve was made with a One-light unit using a 200 Watt I. F. Lamp. To arrive at candlepower values for a 300 Watt Medium Base Lamp multiply by 1.62. Illumination values of the Two-light and Four-light units are respectively twice and four times that value derived from the One-light unit. The distribution of light is concentrating. The spacing of the units should not exceed 0.9 times the mounting height above the working plane. This type of unit is for general illumination in high ceiling areas or locations where Accent Lighting is desired.



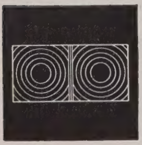
SPECIFICATIONS: The cross-section illustrates the typical construction of the Exposed units with 12" AMCO Lenses. The lamps operate in a horizontal position. The side panels are Flashed Opal Glass. The spherical reflector is made of 20 gauge Aluminum and finished specular Alzak. One and Two-light units are constructed of .037 steel—face trim .05 steel. Four-light units are constructed entirely of .05 steel. One-light boxes and face trim are one-piece stampings. All boxes are treated inside and outside with a base coat of Red Oxide Primer to prevent corrosion. The interior of the box is aluminized. Adequate knockouts are provided. Units are practically dust-tight. Mounting to the ceiling is by means of expansion shields or toggle bolts. All units approved by Underwriters' Laboratories, Inc. Inside Frosted Lamps are recommended.

DATA



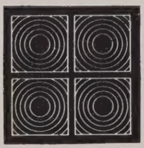
				OVER-ALL DIMENSIONS ON CEILING		
Cat. No.	Distribution Characteristic	Lens Size	Max. Watts	Length	Width	Depth
467	Widespread	12"	300	17"	17"	9"
467C	Coloriser Widespread	12"	300	17"	17"	9"
567	Concentrating	12"	300	17"	17"	9"
567C	Coloriser Concentrating	12"	300	17"	17"	9"

One Lamp—Position Horizontal. Hinged Door.



				OVER-ALL DIMENSIONS ON CEILING		
Cat. No.	Distribution Characteristic	Lens Size	Max. Watts	Length	Width	Depth
468	Widespread	12"	600	28½"	17"	9"
468C	Coloriser Widespread	12"	600	28½"	17"	9"
568	Concentrating	12"	600	28½"	17"	9"
568C	Coloriser Concentrating	12"	600	28½"	17"	9"

Two Lamp—Position Horizontal. Lens Plates Slip in from Bottom.

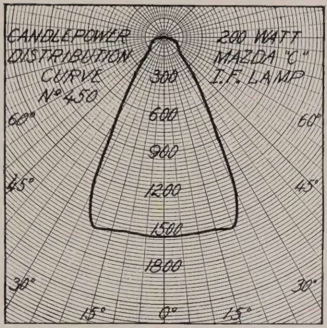


				OVER-ALL DIMENSIONS ON CEILING		
Cat. No.	Distribution Characteristic	Lens Size	Max. Watts	Length	Width	Depth
470	Widespread	12"	1200	28½"	28½"	9"
470C	Coloriser Widespread	12"	1200	28½"	28½"	9"
570	Concentrating	12"	1200	28½"	28½"	9"
570C	Coloriser Concentrating	12"	1200	28½"	28½"	9"

Four Lamp—Position Horizontal. Lens Plates Slip in from Bottom.

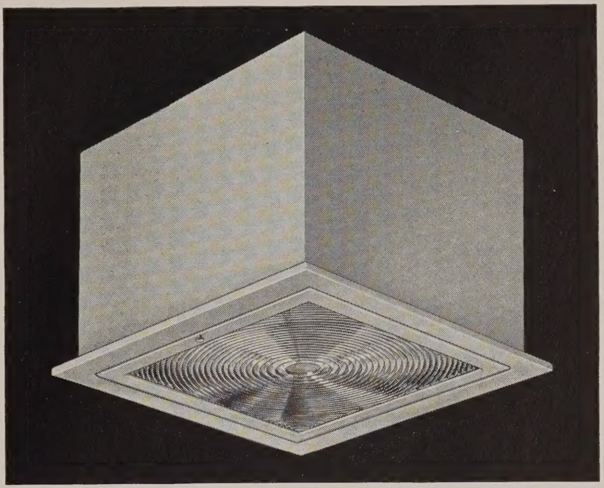
Standard Finish: Satin Aluminum. **Coloriser Lens:** Ivory.

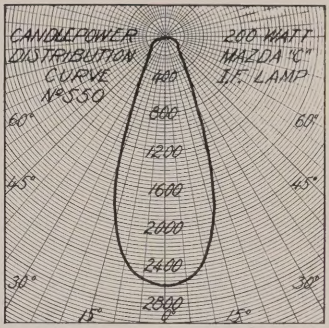
RECESSED UNITS—12″ AMCO LENSES



CANDLEPOWER DISTRIBUTION CURVE UNIT No. 450:

This candlepower distribution curve was made with a One-light unit using a 200 Watt I. F. Lamp. To arrive at candlepower values for 300 Watt Medium Base Lamp multiply by 1.62. Illumination values of the Two-light and Four-light units are respectively twice and four times that value derived from the One-light unit. The distribution of light is extremely wide. The spacing of the units should not exceed one and one quarter times the mounting height above the working plane. This type of unit is for general illumination.

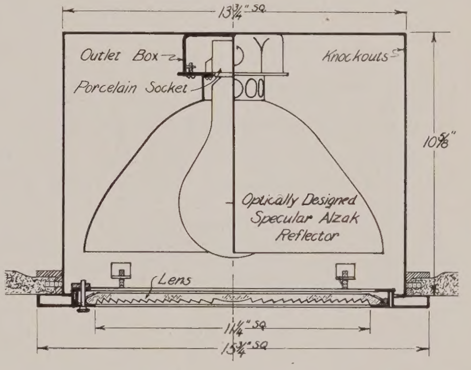



CANDLEPOWER DISTRIBUTION CURVE Nº550
200 WATT MAZDA "C" I.F. LAMP
400
800
1200
1600
2000
2400
2800
60°
60°
45°
45°
30°
30°
15°
0°
15°

CANDLEPOWER DISTRIBUTION CURVE UNIT No. 550:

This candlepower distribution curve was made with a One-light unit using a 200 Watt I. F. Lamp. To arrive at candlepower values for a 300 Watt Medium Base Lamp multiply by 1.62. Illumination values of the Two-light and Four-light units are respectively twice and four times that value derived from the One-light unit. The distribution of light is concentrating. The spacing of the units should not exceed 0.9 times the mounting height above the working plane. This type of unit is for general illumination in high ceiling areas or locations where Accent Lighting is desired.

SPECIFICATIONS: The cross-section illustrates the typical construction of the Recessed Units with 12″ AMCO Lenses. The deep reflector is designed to optically compliment and function with the lens to produce a highly efficient unit. This reflector is made of 18 gauge Aluminum and finished specular Alzak. The lamps operate in a vertical position. All units in this line are constructed throughout of .05 steel. One-light boxes and face trim are one-piece stampings. All boxes are treated inside and outside with a base coat of Red Oxide Primer to prevent corrosion. The interior of the box is aluminized. Adequate knockouts are provided. Units are practically dust-tight. All units approved by Underwriters' Laboratories, Inc. Inside Frosted Lamps are recommended.



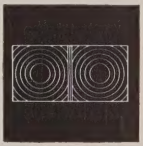
DATA

Cat. No.	Distribution Characteristic	Lens Size	Max. Watts	DIMENSIONS Face Plate	 Insert Box Size
450	Widespread	12″	300	15¾″x15¾″	13¾″x13¾″x10⅝″
450C	Coloriser Widespread	12″	300	15¾″x15¾″	13¾″x13¾″x10⅝″
550	Concentrating	12″	300	15¾″x15¾″	13¾″x13¾″x10⅝″
550C	Coloriser Concentrating	12″	300	15¾″x15¾″	13¾″x13¾″x10⅝″

One Lamp—Position Horizontal. Hinged Door.

Cat. No.	Distribution Characteristic	Lens Size	Max. Watts	DIMENSIONS Face Plate	 Insert Box Size
451	Widespread	12″	600	15½″x27½″	13⅞″x25¾″x13″
451C	Coloriser Widespread	12″	600	15½″x27½″	13⅞″x25¾″x13″
551	Concentrating	12″	600	15½″x27½″	13⅞″x25¾″x13″
551C	Coloriser Concentrating	12″	600	15½″x27½″	13⅞″x25¾″x13″

Two Lamp—Position Horizontal. Lens Plates Slip in from Bottom.

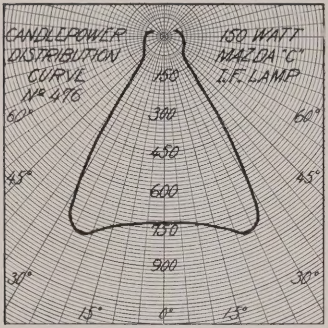


Cat. No.	Distribution Characteristic	Lens Size	Max. Watts	DIMENSIONS Face Plate	 Insert Box Size
454	Widespread	12″	1200	28⅛″x28⅛″	26½″x26½″x13″
454C	Coloriser Widespread	12″	1200	28⅛″x28⅛″	26½″x26½″x13″
554	Concentrating	12″	1200	28⅛″x28⅛″	26½″x26½″x13″
554C	Coloriser Concentrating	12″	1200	28⅛″x28⅛″	26½″x26½″x13″

Four Lamp—Position Vertical. Lens Plates Slip in from Bottom.

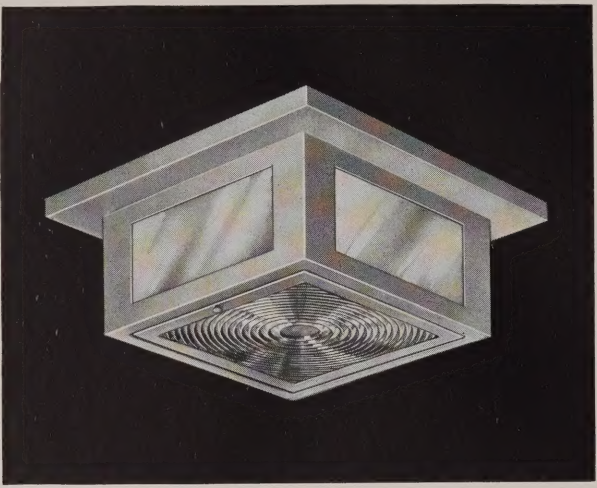
Standard Finish: Satin Aluminum. **Coloriser Lens:** Ivory. **Wire Guard:** See Page 43.

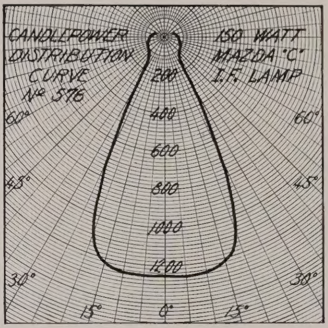
EXPOSED UNITS—8" AMCO LENSES



CANDLEPOWER DISTRIBUTION CURVE UNIT No. 476:

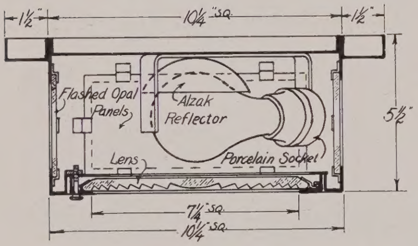
This candlepower distribution curve was made with a One-light unit using a 150 Watt I. F. Lamp. Illumination value of the Two-light unit is twice that value derived from the One-light unit. The distribution of light is extremely wide. The spacing of the units should not exceed one and one quarter times the mounting height above the working plane. This type of unit is for general illumination.




CANDLEPOWER DISTRIBUTION CURVE Nº 576
150 WATT MAZDA "C" I.F. LAMP
200
400
600
800
1000
1200
60°
45°
30°
15°
0°

CANDLEPOWER DISTRIBUTION CURVE UNIT No. 576:

This candlepower distribution curve was made with a One-light unit using a 150 Watt I. F. Lamp. Illumination value of the Two-light unit is twice that value derived from the One-light unit. The distribution of light is concentrating. The spacing of the units should not exceed 0.9 times the mounting height above the working plane. This type of unit is for general illumination in high ceiling areas or locations where Accent Lighting is desired.

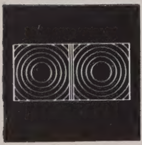


SPECIFICATIONS: The cross-section illustrates the typical construction of the Exposed Units with 8" AMCO Lenses. The lamps operate in a horizontal position. The side panels are Flashed Opal Glass. The spherical reflector is made of 20 gauge Aluminum and finished specular Alzak. These units are constructed of .037 steel—face trim .05 steel. One-light boxes and face trim are one-piece stampings. All boxes are treated inside and outside with a base coat of Red Oxide Primer to prevent corrosion. The interior of the box is aluminized. Adequate knockouts are provided. Units are practically dust-tight. Mounting to the ceiling is by means of expansion shields or toggle bolts. All units approved by Underwriters' Laboratories, Inc. Inside Frosted Lamps are recommended.

DATA

				OVERALL DIMENSIONS ON CEILING		
Cat. No.	Distribution Characteristics	Lens Size	Max. Watts	Length	Width	Depth
476	Widespread	8"	150	13¼"	13¼"	5½"
476C	Coloriser Widespread	8"	150	13¼"	13¼"	5½"
576	Concentrating	8"	150	13¼"	13¼"	5½"
576C	Coloriser Concentrating	8"	150	13¼"	13¼"	5½"

One Lamp—Position Horizontal. Hinged Door.

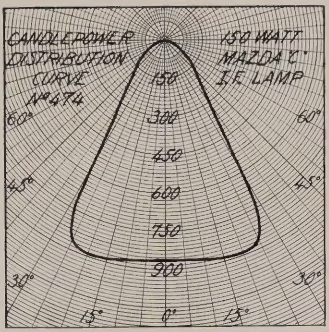


				OVERALL DIMENSIONS ON CEILING		
Cat. No.	Distribution Characteristics	Lens Size	Max. Watts	Length	Width	Depth
477	Widespread	8"	300	21⅛"	13¼"	5½"
477C	Coloriser Widespread	8"	300	21⅛"	13¼"	5½"
577	Concentrating	8"	300	21⅛"	13¼"	5½"
577C	Coloriser Concentrating	8"	300	21⅛"	13¼"	5½"

Two Lamp—Position Horizontal. Lens Plates Slip in from Bottom.

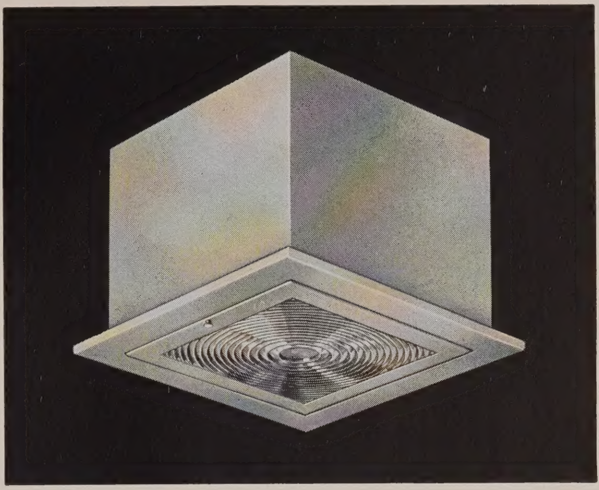
Standard Finish: Satin Aluminum. **Coloriser Lens:** Ivory.

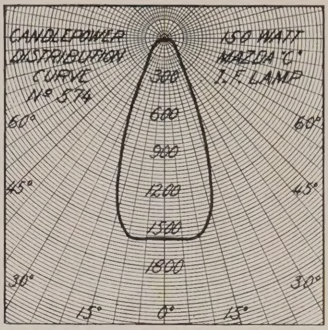
RECESSED UNITS—8″ AMCO LENSES



CANDLEPOWER DISTRIBUTION CURVE UNIT No. 474:

This candlepower distribution curve was made with a One-light unit using a 150 Watt I. F. Lamp. The distribution of light is extremely wide. The spacing of the units should not exceed one and one quarter times the mounting height above the working plane. This type of unit is for general illumination.

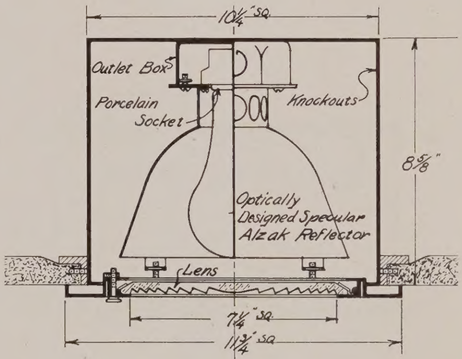



CANDLEPOWER DISTRIBUTION CURVE No 574
150 WATT MAZDA "C" I.F. LAMP
300
600
900
1200
1500
1800
60°
45°
30°
15°
0°

CANDLEPOWER DISTRIBUTION CURVE UNIT No. 574:

This candlepower distribution curve was made with a One-light unit using a 150 Watt I. F. Lamp. The distribution of light is concentrating. The spacing of the units should not exceed 0.9 times the mounting height above the working plane. This type of unit is for general illumination in high ceiling areas or locations where Accent Lighting is desired.

SPECIFICATIONS: The cross-section illustrates the typical construction of the Recessed Unit with 8″ AMCO Lens. The deep reflector is designed to optically compliment and function with the lens to produce a highly efficient unit. This reflector is made of 18 gauge Aluminum and finished specular Alzak. The lamp operates in a vertical position. This unit is constructed of .037 steel—face trim .05 steel. The box and the face trim are one-piece stampings. The box is treated inside and outside with a base coat of Red Oxide Primer to prevent corrosion. The interior of the box is aluminized. Adequate knockouts are provided. The unit is practically dust-tight. Approved by Underwriters' Laboratories, Inc. Inside Frosted Lamps are recommended.



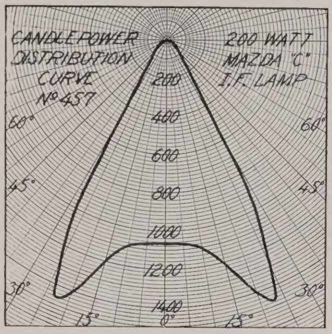
DATA

				DIMENSIONS	
Cat. No.	Distribution Characteristic	Lens Size	Max. Watts	Face Plate	Insert Box Size
474	Widespread	8″	150	11¾″x11¾″	10¼″x10¼″x8⅝″
474C	Coloriser Widespread	8″	150	11¾″x11¾″	10¼″x10¼″x8⅝″
574	Concentrating	8″	150	11¾″x11¾″	10¼″x10¼″x8⅝″
574C	Coloriser Concentrating	8″	150	11¾″x11¾″	10¼″x10¼″x8⅝″

One Lamp—Position Vertical. Hinged Door.

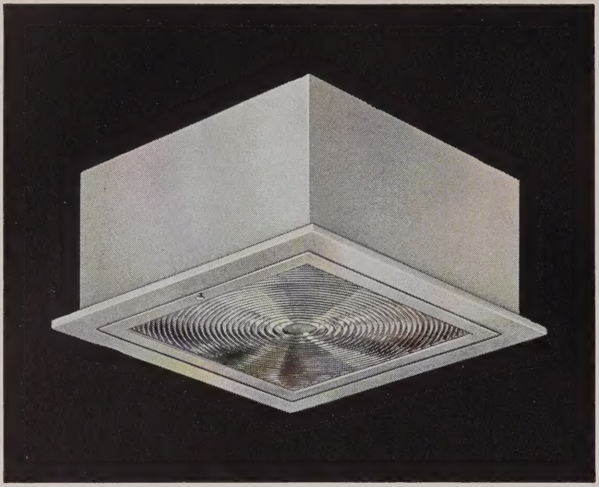
Standard Finish: Satin Aluminum. **Coloriser Lens:** Ivory. **Wire Guards:** See Page 43.

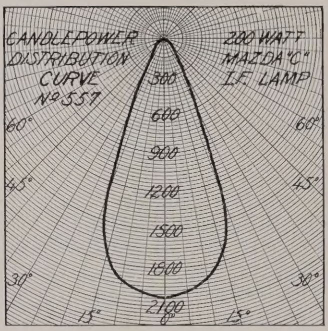
SHALLOW RECESSED UNITS—12″ AMCO LENSES



CANDLEPOWER DISTRIBUTION CURVE UNIT No. 457:

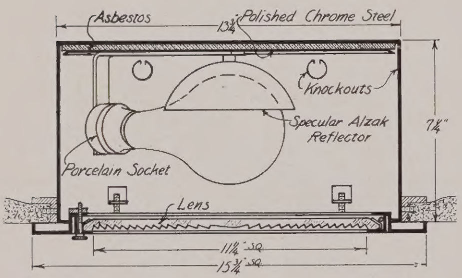
This candlepower distribution curve was made with a 200 Watt I. F. Lamp. To arrive at candlepower values for a 300 Watt Medium Base Lamp multiply by 1.62. The distribution of light is extremely wide. The spacing of the units should not exceed one and one quarter times the mounting height above the working plane. This unit is for general illumination.




CANDLEPOWER DISTRIBUTION CURVE Nº 557
200 WATT MAZDA "C" I.F. LAMP
300
600
900
1200
1500
1800
2100
60°
45°
30°
15°
0°
15°
30°
45°
60°

CANDLEPOWER DISTRIBUTION CURVE UNIT No. 557:

This candlepower distribution curve was made with a 200 Watt I. F. Lamp. To arrive at candlepower values for a 300 Watt Medium Base Lamp multiply by 1.62. The distribution of light is concentrating. The spacing of the units should not exceed 0.9 times the mounting height above the working plane. This unit is for general illumination in high ceiling areas or locations where Accent Lighting is desired.



SPECIFICATIONS: The cross-section illustrates the typical construction of the Shallow Recessed Unit with 12″ AMCO Lens. The lamp operates in a horizontal position. The spherical reflector is made of 20 gauge Aluminum and finished specular Alzak. The box and the face trim are one-piece stampings. The box is constructed of .037 steel—face trim .05 steel. It is treated inside and outside with a base coat of Red Oxide Primer to prevent corrosion. The interior of the box is aluminized. A one-quarter inch thickness of porous asbestos is placed in the inside top of the box and held in position with a polished chrome steel sheet. Adequate knockouts are provided. The unit is practically dust-tight. Approved by Underwriters' Laboratories, Inc. Inside Frosted Lamps are recommended.

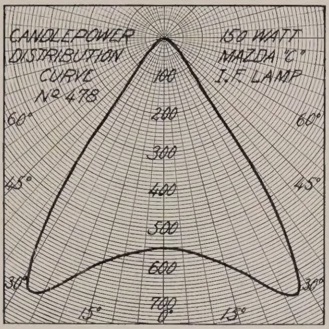
DATA

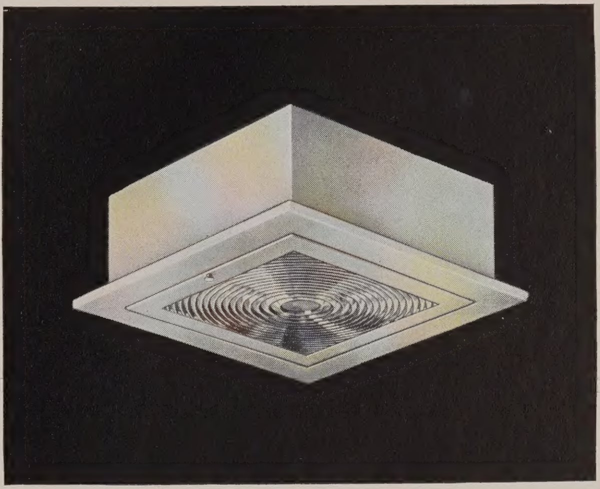
				DIMENSIONS	
Cat. No.	Distribution Characteristic	Lens Size	Max. Watts	Face Plate	Insert Box Size
457	Widespread	12″	300	15¾″x15¾″	13¾″x13¾″x7¼″
457C	Coloriser Widespread	12″	300	15¾″x15¾″	13¾″x13¾″x7¼″
557	Concentrating	12″	300	15¾″x15¾″	13¾″x13¾″x7¼″
557C	Coloriser Concentrating	12″	300	15¾″x15¾″	13¾″x13¾″x7¼″

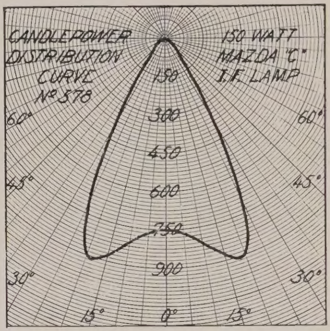
One Lamp—Position Horizontal. Hinged Door.

Standard Finish: Satin Aluminum. **Coloriser Lens:** Ivory. **Wire Guards:** See Page 43.

SHALLOW RECESSED UNITS—8" AMCO LENSES






CANDLEPOWER DISTRIBUTION CURVE Nº 578
150 WATT MAZDA "C" I.F. LAMP
150
300
450
600
750
900
60°
60°
45°
45°
30°
30°
15°
0°
15°

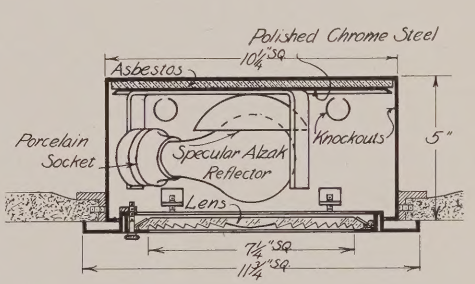
CANDLEPOWER DISTRIBUTION CURVE UNIT No. 478:

This candlepower distribution curve was made with a 150 Watt I. F. Lamp. The distribution of light is extremely wide. The spacing of the units should not exceed one and one quarter times the mounting height above the working plane. This type of unit is for general illumination.

CANDLEPOWER DISTRIBUTION CURVE UNIT No. 578:

This candlepower distribution curve was made with a 150 Watt I. F. Lamp. The distribution of light is concentrating. The spacing of the units should not exceed 0.9 times the mounting height above the working plane. This unit is for general illumination in high ceiling areas or locations where Accent Lighting is desired.

SPECIFICATIONS: The cross-section illustrates the typical construction of the Shallow Recessed Unit with 8" AMCO Lens. The lamp operates in a horizontal position. The spherical reflector is made of 20 gauge Aluminum and finished specular Alzak. The box and the face trim are one-piece stampings. The box is constructed of .037 steel—face trim .05 steel. It is treated inside and outside with a base coat of Red Oxide Primer to prevent corrosion. The interior of the box is aluminized. A one-quarter inch thickness of porous asbestos is placed in the inside top of the box and held in position with a polished chrome steel sheet. Adequate knockouts are provided. The unit is practically dust-tight. Approved by Underwriters' Laboratories, Inc. Inside Frosted Lamps are recommended.



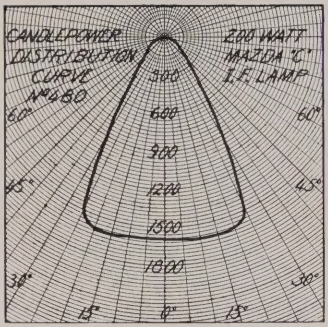
DATA

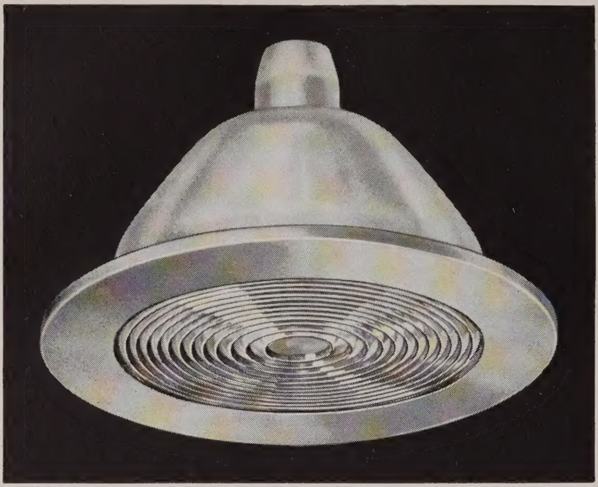
Cat. No.	Distribution Characteristic	Lens Size	Max. Watts	DIMENSIONS Face Plate	 Insert Box Size
478	Widespread	8"	150	11¾"x11¾"	10¼"x10¼"x5"
478C	ColoriserWidespread	8"	150	11¾"x11¾"	10¼"x10¼"x5"
578	Concentrating	8"	150	11¾"x11¾"	10¼"x10¼"x5"
578C	Coloriser Concentrating	8"	150	11¾"x11¾"	10¼"x10¼"x5"

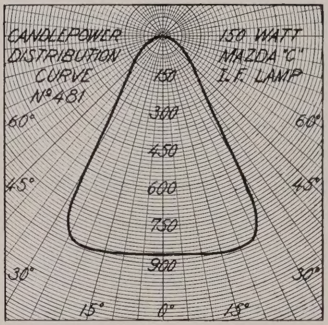
One Lamp—Position Horizontal. Hinged Door.

Standard Finish: Satin Aluminum. **Coloriser Lens:** Ivory. **Wire Guards:** See Page 43.

ROUND RECESSED UNITS—AMCO LENSES






CANDLEPOWER DISTRIBUTION CURVE Nº481
150 WATT MAZDA "C" I.F. LAMP
150
300
450
600
750
900
60°
45°
30°
15°
0°
15°
30°
45°
60°

UNIT No. 480:

CANDLEPOWER DISTRIBUTION CURRVE

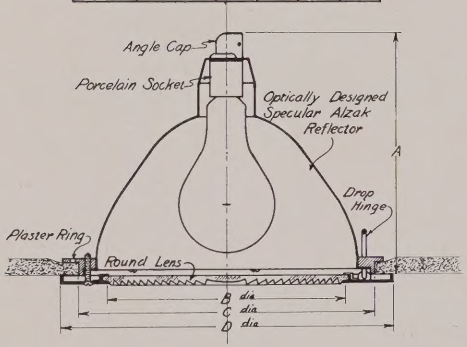
This candlepower distribution curve was made with a 200 Watt I. F. Lamp. To arrive at candlepower values for a 300 Watt Medium Base Lamp multiply by 1.62. The distribution of light is extremely wide. The spacing of the units should not exceed one and one quarter times the mounting height above the working plane. This unit is for general illumination.

UNIT No. 481:

CANDLEPOWER DISTRIBUTION CURVE

This candlepower distribution curve was made with a 150 Watt I. F. Lamp. The distribution of light is extremely wide. The spacing of the units should not exceed one and one quarter times the mounting height above the working plane. This unit is for general illumination.

UNIT Nº	LAMP SIZE	A	B	C	D
480	300 watt	11"	10⅞"	13½"	15⅛"
481	150 watt	9¼"	8"	10½"	12¼"



SPECIFICATIONS: These Round Recessed Units are of Single Unit construction as the reflector functions as the housing. This is made of 18 gauge Aluminum finished specular Alzak. The cast plaster ring holds the reflector and the lens frame together as a unit. The lens frame is drop-hinged. The lamp operates in a vertical position. The unit is practically dust-tight. Approved by Underwriters' Laboratories, Inc. Inside Frosted Lamps are recommended.

DATA

				DIMENSIONS	
Cat. No.	Distribution Characteristic	Lens Size	Max. Watts	Face Plate	Insert Box Size
480	Widespread	11¼" Dia.	300	15⅛" Dia.	13½" Dia. x 11"
480C	Coloriser Widespread	11¼" Dia.	300	15⅛" Dia.	13½" Dia. x 11"

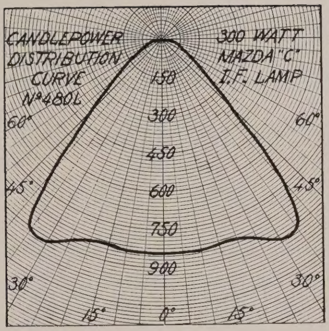
One Lamp—Position Vertical. Drop-Hinged Front.

				DIMENSIONS	
Cat. No.	Distribution Characteristic	Lens Size	Max. Watts	Face Plate	Insert Box Size
481	Widespread	8⅜" Dia.	150	12¼" Dia.	10½" Dia. x 9¼"
481C	Coloriser Widespread	8⅜" Dia.	150	12¼" Dia.	10½" Dia. x 9¼"

One Lamp—Position Vertical. Drop-Hinged Front.

Standard Finish: Satin Aluminum. **Coloriser Lens:** Ivory.

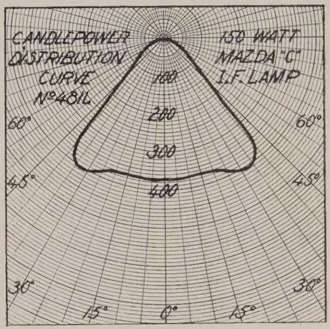
ROUND RECESSED UNITS WITH METAL LOUVRES



UNIT No. 480L:

CANDLEPOWER DISTRIBUTION CURVE

This candlepower distribution curve was made with a 300 Watt Medium Base I. F. Lamp. The metal louvres are so designed that the cut-off is 45 degrees.



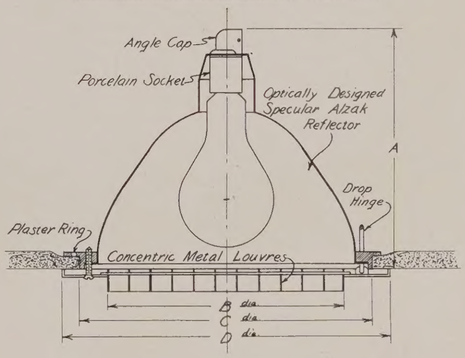
UNIT No. 481L:

CANDLEPOWER DISTRIBUTION CURVE

This candlepower distribution curve was made with a 150 Watt I. F. Lamp. The metal louvres are so designed that the cut-off is 45 degrees.

SPECIFICATIONS: These units are of Single Unit construction as the reflector functions as the housing. This is made of 18 gauge Aluminum finished specular Alzak. The cast plaster ring holds the reflector and the louvre frame together as a unit. The louvre frame is drop-hinged. The lamp operates in a vertical position. Approved by Underwriters' Laboratories, Inc. Inside Frosted Lamps are recommended.

UNIT Nº	LAMP SIZE	A	B	C	D
480L	300 watt	11"	10⅞"	13½"	15⅛"
481L	150 watt	9¼"	8"	10½"	12¼"


Angle Cap
Porcelain Socket
Optically Designed Specular Alzak Reflector
A
Drop Hinge
Plaster Ring
Concentric Metal Louvres
B dia.
C dia.
D dia.

DATA

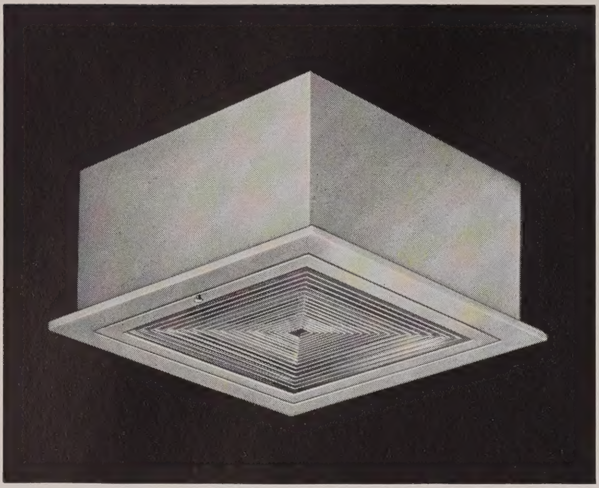
				DIMENSIONS	
Cat. No.	Distribution Characteristic	Lens Size	Max. Watts	Face Plate	Insert Box Size
480L	Concentric Louvres	11¼" Dia.	300	15⅛" Dia.	13½" Dia. x 11"
481L	Concentric Louvres	8⅜" Dia.	150	12¼" Dia.	10½" Dia. x 9¼"

One Lamp—Position Vertical. Drop-Hinged Front.

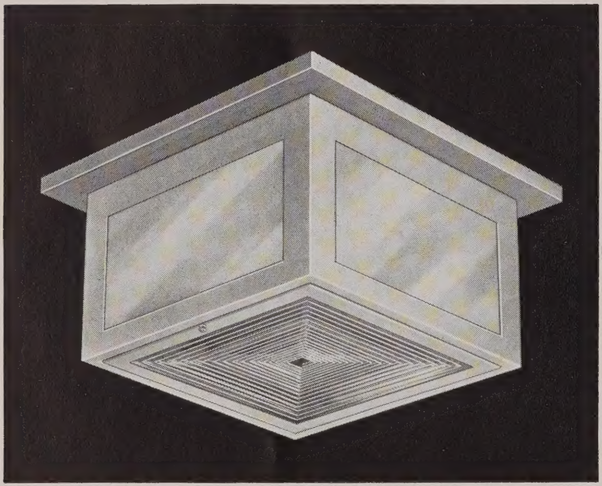
Standard Finish: Satin Aluminum. **Louvre:** Matt White.

ILLUMINATING GLASS PLATE UNITS

RECESSED AND EXPOSED TYPES



No. 657 Recessed Unit



No. 667 Exposed Unit

SPECIFICATIONS

The lamp operates in a horizontal position. The distribution of light is diffuse. The side panels of the Exposed Units are Flashed Opal Glass. The spherical reflector is made of 20 gauge Aluminum and finished specular. These boxes and face trim are one-piece stampings. The boxes are constructed of .037 steel—face trim .05 steel. They are treated inside and outside with a base coat of Red Oxide Primer to prevent corrosion. The interior of the box is aluminized. A one-quarter inch thickness of porous asbestos is placed in the inside top of the recessed box and held in position with a polished chrome steel sheet. Adequate knockouts are provided. The unit is practically dust-tight. Approved by Underwriters' Laboratories Inc. Inside Frosted Lamps recommended.

DATA

				DIMENSIONS	
Cat. No.	Distribution Characteristic	Plate Size	Max. Watts	Face Plate	Insert Box Size
657 Recessed	Diffuse	12"	300	15¾"x15¾"	13¾"x13¾"x7¼"
678 Recessed	Diffuse	8"	150	11¾"x11¾"	10¼"x10¼"x5"
667 Exposed	Diffuse	12"	300	Overall Dia. on Ceiling	17"x17"x9"
676 Exposed	Diffuse	8"	150	Overall Dia. on Ceiling	13¼"x13¼"x5½"

One Lamp—Position Horizontal. Hinged Door.

Standard Finish: Satin Aluminum.

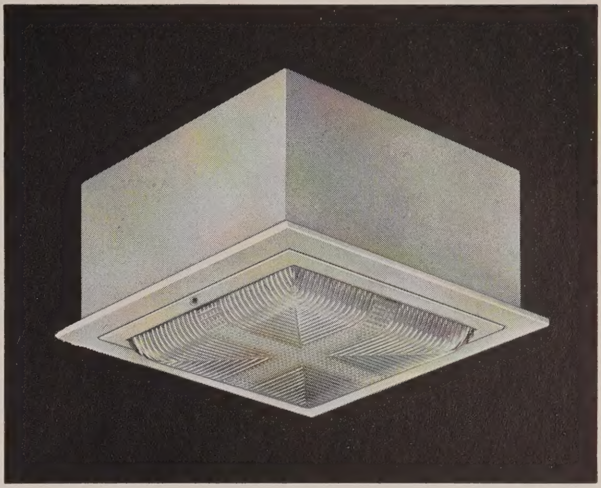
ARCHITECTURAL GLASS PLATE UNITS

RECESSED TYPES

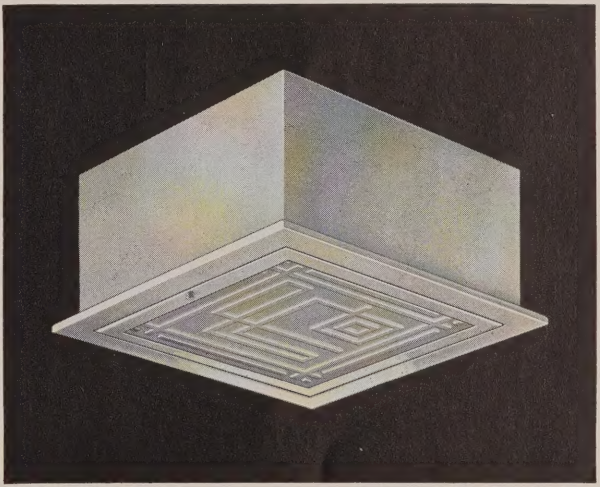
● The conventional and pleasing design of these Architectural Glass Plates make them quite versatile in their application. Interesting patterns may be worked out with groups of these units. The distribution of light from these units is diffuse.

SPECIFICATIONS

The lamp operates in a horizontal position. The spherical reflector is made of 20 gauge Aluminum finished specular. These boxes and face trim are one-piece stampings. The boxes are constructed of .037 steel—face trim .05 steel. They are treated inside and outside with a base coat of Red Oxide Primer to prevent corrosion. The interior of the box is aluminized. A one-quarter inch thickness of porous asbestos is placed in the inside top of the box and held in position with a polished chrome steel sheet. Adequate knockouts are provided. The unit is practically dust-tight. Approved by Underwriters' Laboratories Inc. Inside Frosted Lamps are recommended.



No. 457E



No. 457F

DATA

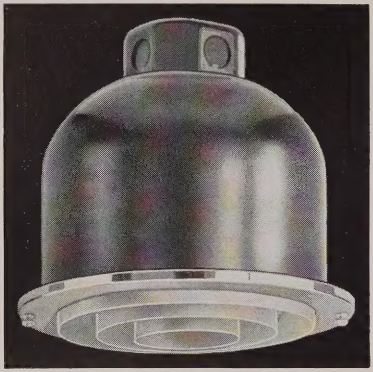
				DIMENSIONS	
Cat. No.	Distribution Characteristic	Plate Size	Max. Watts	Face Plate	Insert Box Size
457E	Diffuse	12″	300	15¾″x15¾″	13¾″x13¾″x7¼″
478E	Diffuse	8″	150	11¾″x11¾″	10¼″x10¼″x5″
457F	Diffuse	12″	300	15¾″x15¾″	13¾″x13¾″x7¼″

One Lamp—Position Horizontal.

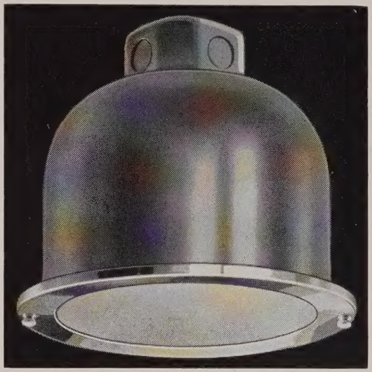
Standard Finish: Satin Aluminum.

RECESSED DOWNLITES

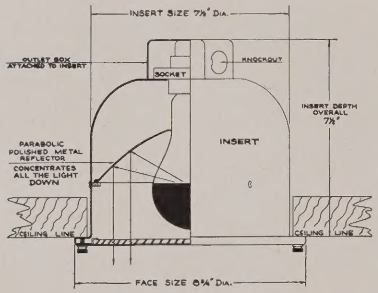
These Recessed Downlites are made with two different types of light transmitting media. The concentric metal louvre type is for use with a 100 Watt I. F. Lamp and has approximately a 45 degree cut-off. The type utilizing the Luxlite Glass Plate is for use with a 100 Watt Silver-Bowl Lamp. The lamps operate in a vertical position. The face trim of these units is Polished Chromtint. The insert housing is finished in Black. The interior of the units is aluminized. The Parabolic Reflector is Polished Aluminum.



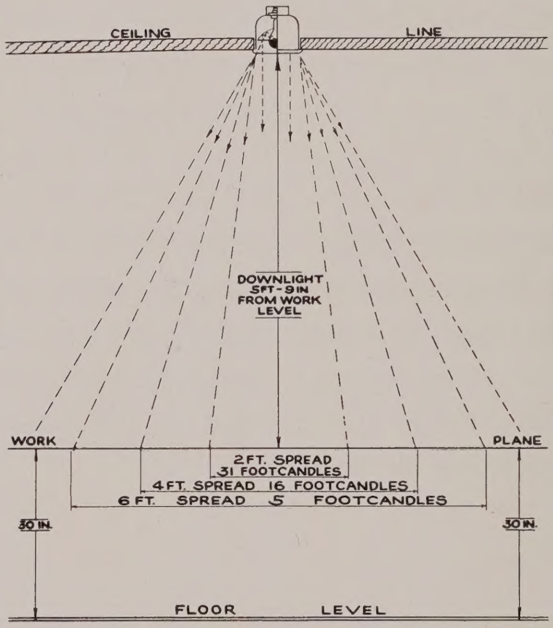
No. 1925L Metal Louvre Bottom.



No. 1925 Glass Bottom.


INSERT SIZE 7½" DIA.
OUTLET BOX ATTACHED TO INSERT
SOCKET
KNOCKOUT
INSERT DEPTH OVERALL 7½"
INSERT
PARABOLIC POLISHED METAL REFLECTOR
CONCENTRATES ALL THE LIGHT DOWN
CEILING LINE
CEILING LINE
FACE SIZE 8¾" DIA.

Cross section showing construction with Glass Bottom. and Silver Bowl Lamp.


CEILING LINE
DOWNLIGHT 5FT-9IN FROM WORK LEVEL
WORK PLANE
2 FT. SPREAD 31 FOOTCANDLES
4 FT. SPREAD 16 FOOTCANDLES
6 FT. SPREAD 5 FOOTCANDLES
30 IN.
30 IN.
FLOOR LEVEL

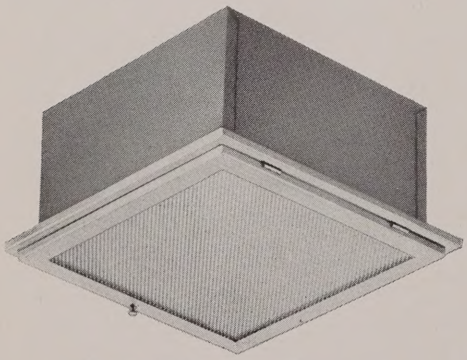
Pictorial description of footcandles delivered and distributed on work plane.

DATA

1925 —Face size 8¾" Dia., Insert size 7½" Dia., 7½" Deep. Furnished complete with 3¼" Outlet Box attached.

1925L—Concentric Metal Louvre type. Face size 8¾" Dia., Insert size 7½" Dia., 7½" Deep. Furnished complete with 3¼" Outlet Box attached.

SOFFITS



Square Soffit—Luxlite Glass Plate

SQUARE UNITS

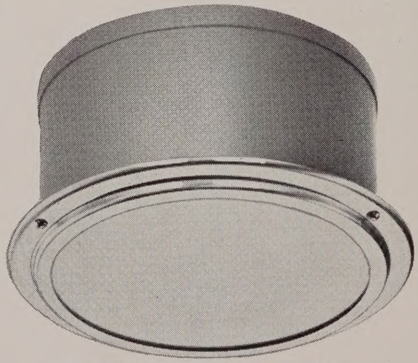
Hinged Fronts.
Front finish SATIN NICKEL.

No.	Lights	Face Size	Insert Size	Insert Depth
1504	1	8¾" Sq.	7¼" Sq.	5"
1505	2	10¾" Sq.	9¼" Sq.	5"
1506	2	12¾" Sq.	11¼" Sq.	5½"

ROUND UNITS

Front screws on.
Front finish SATIN NICKEL.

No.	Lights	Face Size	Insert Size	Insert Depth
1501	1	9" Dia.	7½" Dia.	4"
1502	2	11" Dia.	9½" Dia.	5"
1503	2	13" Dia.	11½" Dia.	5"

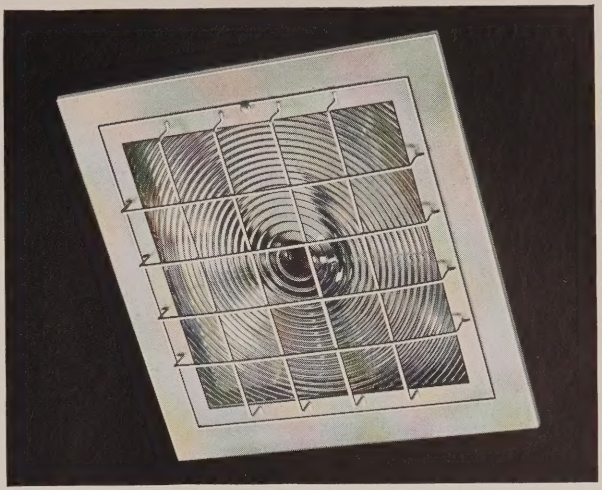


Round Soffit—Luxlite Glass Plate

WIRE GUARDS FOR SQUARE RECESSED UNITS

To protect the lens in hazardous locations a wire guard is available for Square Recessed Units of the Art Metal Optical System of Direct Illumination. The units utilizing wire guards are noted on pages 33, 35, 36 and 37.

The illustration shows a wire guard for a single light unit. The wire guard on this unit is fastened directly to the hinged door of the box. The two-light and four-light units are hinged as a unit. The wire guard swings down from the front of the lens trim for easy access.



● ● ●

ART METAL OPTICAL SYSTEM ADDENDUM

● Units for black board lighting, art galleries, surgeries and special applications such as psychiatric cubicles, wards, jail cells and hazardous locations are specially designed and constructed to meet the requisites of each particular job. These are not cataloged—blue prints and specifications will be furnished on request.

● ● ●

Multiple units, exposed or recessed, 3, 5 and 6 lights articulated as well as Semi-exposed units, not cataloged, amplify this line.

Units utilizing 6½″ square AMCO lenses may also be had in any of the standard types of units and distributions, cataloged in larger lens sizes.

A 6⅝″ diameter round AMCO lens supplements the line in a recessed type unit for utilitarian purposes.

ENGINEERING SERVICE

Due to the technical character of the Art Metal Optical System of Direct Illumination, Architects, Engineers and Specification writers will find our Illuminating Engineering Service helpful in working out lighting problems of a special or unusual nature.

FLUORESCENT LIGHTING EQUIPMENT

ENGINEERING SERVICE

● FLUORESCENT lighting installations can be planned on the same basic concepts as INCANDESCENT lighting, however, FLUORESCENT Lighting is a highly specialized form of illumination and requires competent engineered planning to insure a lighting installation of the utmost efficiency.

We suggest problems on special applications or major general lighting installations be submitted our Illuminating Engineering Department for layout.

RATED LUMEN TABLES

TYPE F FLUORESCENT LAMPS

Lamp	Watts	Daylight	White
18″ T8	15	495	585
24″ T12	20	760	900
36″ T8	30	1250	1450
48″ T12	40	1800	2100
60″ T17	100	. . . .	4400

In any computation involving wattage or over-all efficiency of Fluorescent Lighting the ballast wattage must not be neglected. This is a variable ranging from 15%-30% of the wattage of the lamps themselves.

TYPE C MAZDA I.F. LAMPS

Wattage	Lumens
40	470
60	830
100	1600
150	2600
200	3700
300	5750
500	10,000
1000	21,000

OPERATING EQUIPMENT

All Fluorescent units shown in this catalog are complete with latest type starters and lamp ballasts for operation on 110-125V—60 cycle A.C.

Fluorescent fixtures of 2-4-6 or 8 lamps are equipped with High Power Factor Tu-Lamp ballasts which make use of the split phase principle—one lamp being ballasted by inductance and the other lamp by inductance and capacitance in series, minimizing cyclic flicker or stroboscopic effect.

Single Lamp Fluorescent fixtures are listed with high power factor ballasts and also with uncorrected ballasts. Equipment originally installed with low power factor ballasts can always have corrective capacitors added later if required.

POWER-FACTOR

The importance of power factor arises from the fact that uncorrected Fluorescent ballast equipment commonly called low power factor (55%-60% power factor) places a handicap on the wiring and control devices on the customer's premises. The Utility Companies are, in many instances, requiring high power factor (85%-90%) because low power factor devices require generating and power distribution equipment capacity out of all proportion to the energy registered.

All Art Metal high power-factor Fluorescent fixtures conform to the requirements of all Utility regulations having to do with this subject.

WARRANTY

All units are tested before leaving factory—The Art Metal Company assumes no responsibility for the performance or life of any component equipment not of our manufacture.

The manufacturers of starter switches and ballasts will replace defective equipment but will accept no labor or transportation charges.

ORDERS

ALL ORDERS MUST SPECIFY voltage and cycles, A.C. (standard). Equipment for D.C. or 50 Cycle A.C. is special—prices on application.

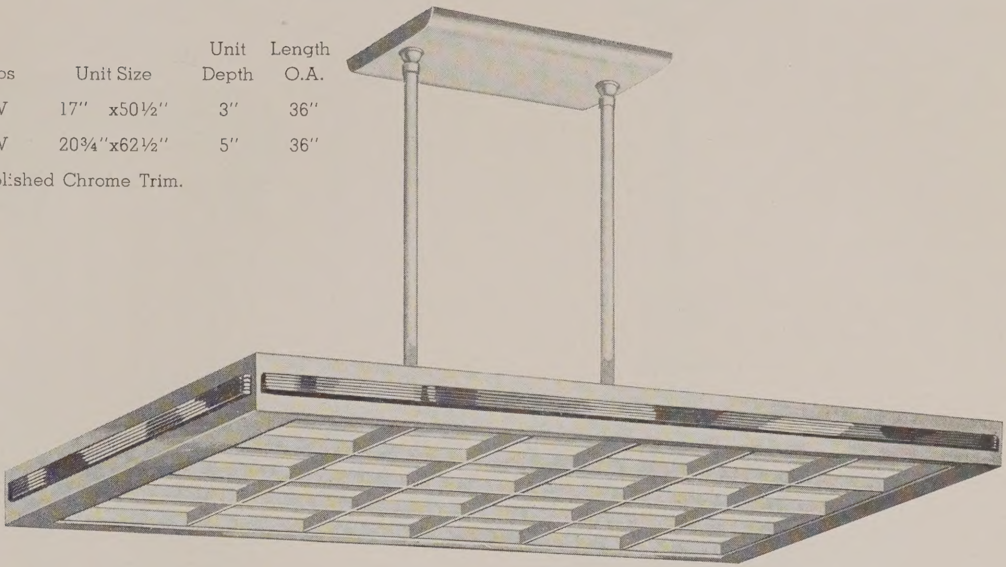
LOUVRLUX UNITS

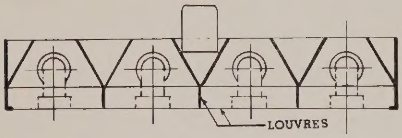
Cat. No.	Mazda F Lamps	Unit Size	Unit Depth	Length O.A.
2410	4—48″—160W	17″ x50½″	3″	36″
2411	4—60″—400W	20¾″x62½″	5″	36″

Finish: Satin Aluminum—Polished Chrome Trim.

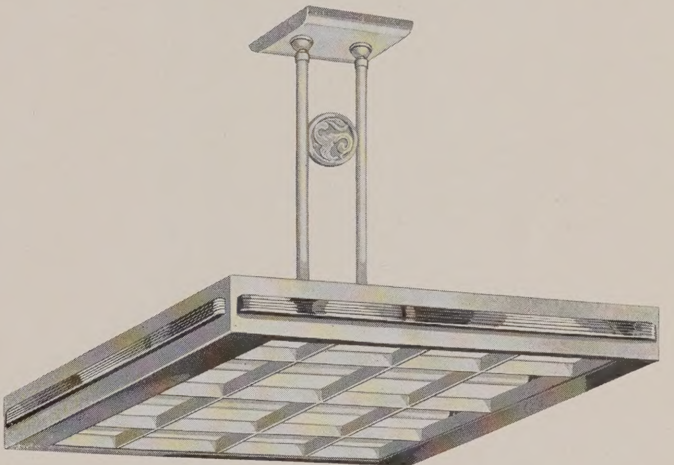
Reflectors: Matt White.

Louvres: Matt Aluminum.





SECTION (covering all units on this page) showing ingenious design permitting an upward spill of approximately 25% of the light together with 75% of down light. Reflectors are designed for maximum wide spread distribution. The louvre arrangement neutralizes objectionable brightness in the field of vision. The cut-off is 65 degrees. This open reflector design is ideal in minimizing dust collection, particularly on reflecting surfaces.

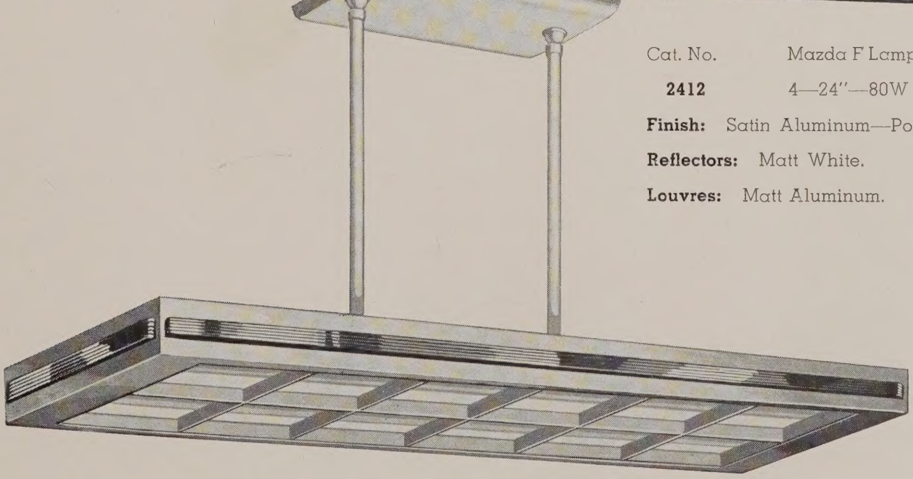


Cat. No.	Mazda F Lamps	Unit Size	Unit Depth	Length O.A.
2412	4—24″—80W	17″x26½″	3″	30″

Finish: Satin Aluminum—Polished Chrome Trim.

Reflectors: Matt White.

Louvres: Matt Aluminum.



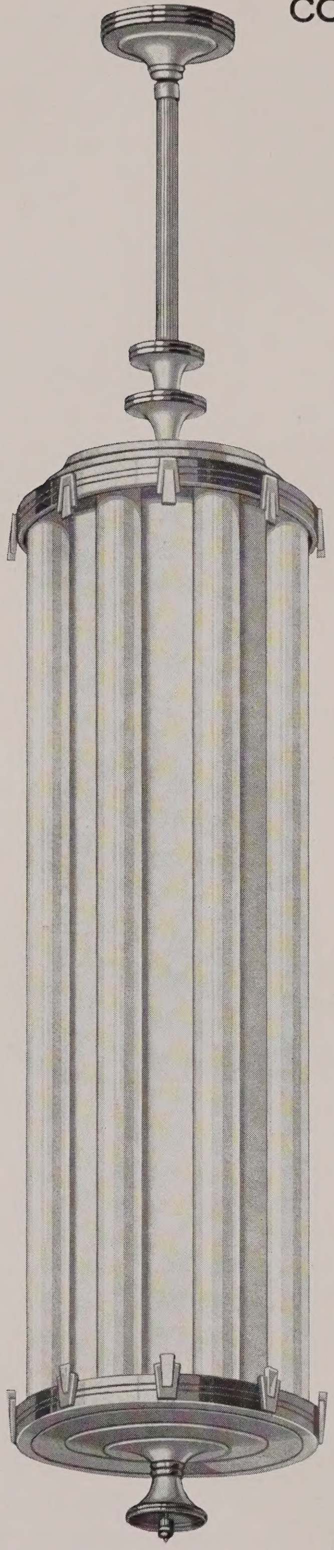
Cat. No.	Mazda F Lamps	Unit Size	Unit Depth	Length O.A.
2413	2—48″— 80W	8½″x50½″	3″	36″
2414	2—60″—200W	10½″x62½″	5″	36″

Finish: Satin Aluminum—Polished Chrome Trim.

Reflectors: Matt White.

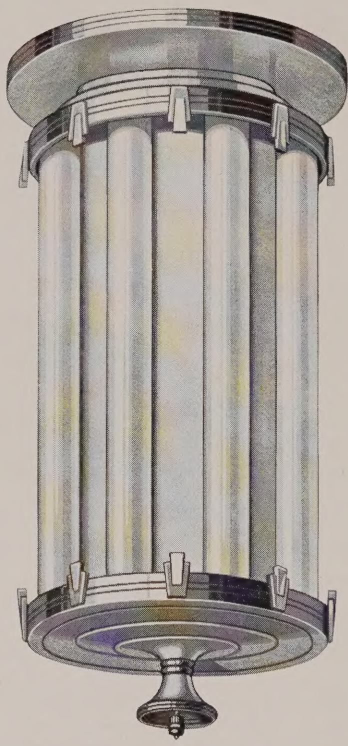
Louvres: Matt Aluminum.

COLONNADE UNITS



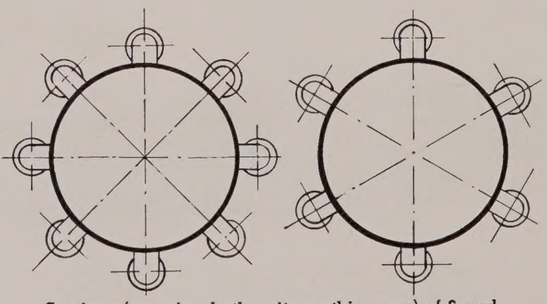
Cat. No.	Mazda F Lamps	O.A. Dia.	Length O.A.
2420	6—48″—240W	14¼″	7′-0″
2421	8—48″—320W	14¼″	7′-0″

Finish: Satin Aluminum—Gold Trim.
Reflecting Surface: Matt White.



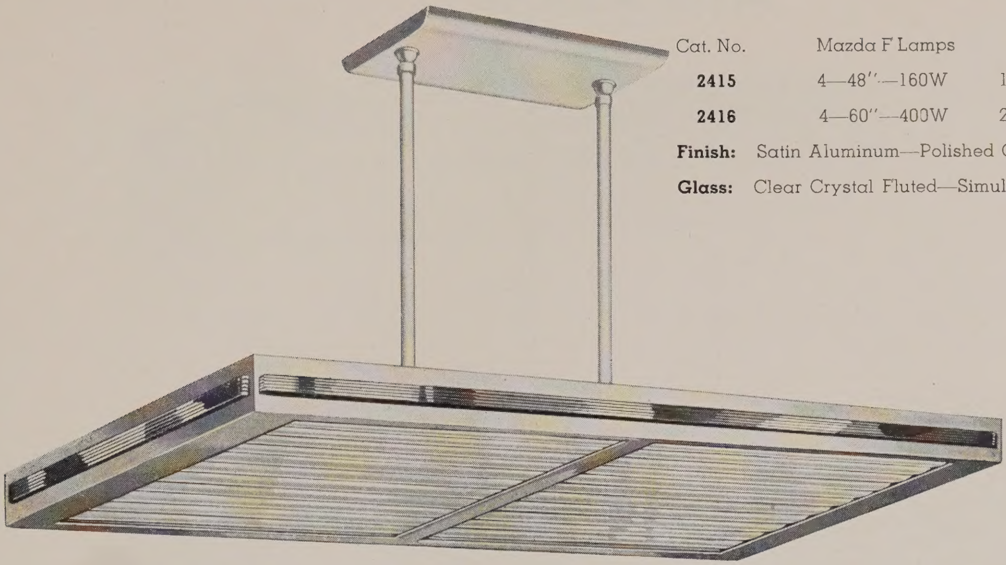
Cat. No.	Mazda F Lamps	O.A. Dia.	Length O.A.
2422	6—24″—120W	14¼″	36″
2423	8—24″—160W	14¼″	36″
2424	6—48″—240W	14¼″	60″
2425	8—48″—320W	14¼″	60″

Finish: Satin Aluminum—Gold Trim.
Reflecting Surface: Matt White.



Sections (covering both units on this page) of 6 and 8 light units showing lamp positions.

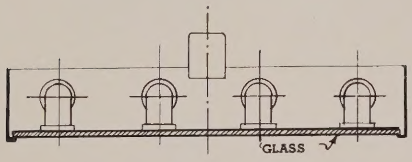
EQUALUX UNITS



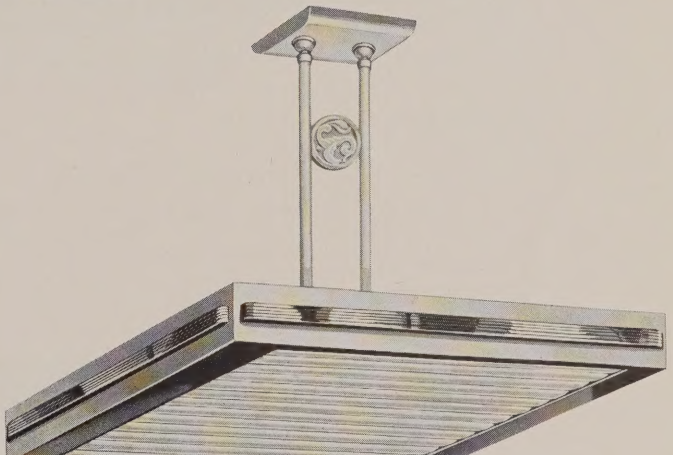
Cat. No.	Mazda F Lamps	Unit Size	Unit Depth	Length O.A.
2415	4—48″—160W	17″ x50½″	3″	36″
2416	4—60″—400W	20½″x62½″	5″	36″

Finish: Satin Aluminum—Polished Chrome Trim.

Glass: Clear Crystal Fluted—Simulates Louvering.



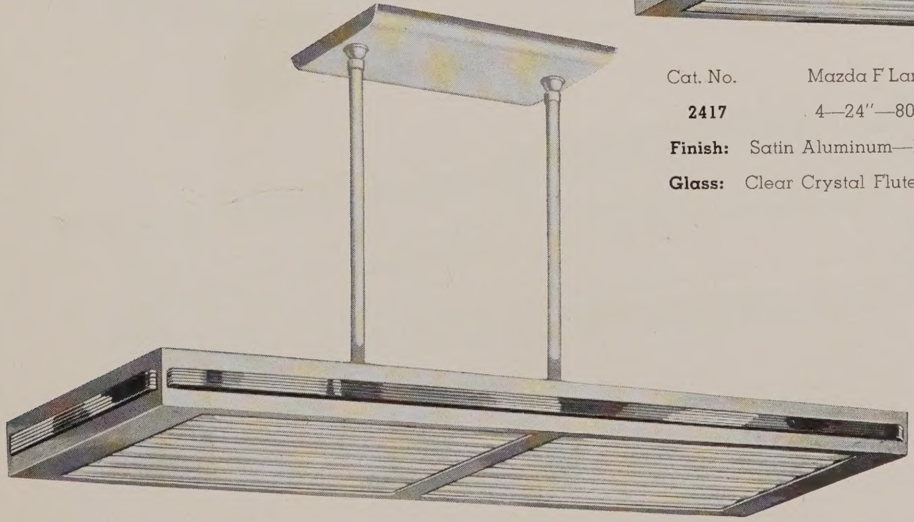
Section (covering all units on this page) showing lamp positions and Tu-Lamp ballasts. Bottom glass panels of clear crystal fluted simulates louvering and at the same time imparts sparkle and eye-appeal with low surface brightness.



Cat. No.	Mazda F Lamps	Unit Size	Unit Depth	Length O.A.
2417	4—24″—80W	17″x26½″	3″	30″

Finish: Satin Aluminum—Polished Chrome Trim.

Glass: Clear Crystal Fluted—Simulates Louvering.

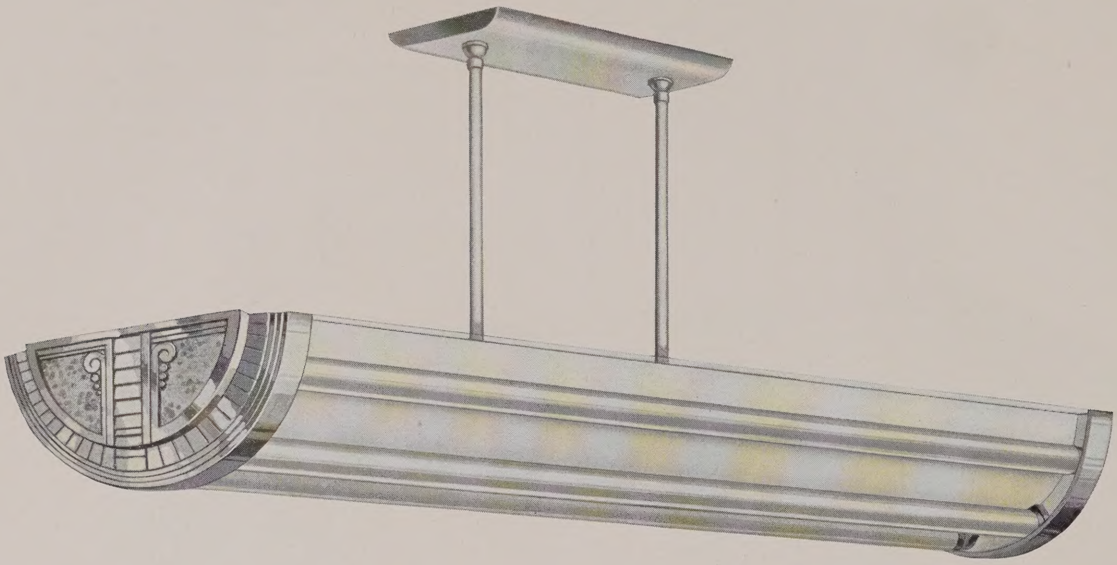


Cat. No.	Mazda F Lamps	Unit Size	Unit Depth	Length O.A.
2418	2—48″— 80W	8½″x50½″	3″	36″
2419	2—60″—200W	10½″x62½″	5″	36″

Finish: Satin Aluminum—Polished Chrome Trim.

Glass: Clear Crystal Fluted—Simulates Louvering.

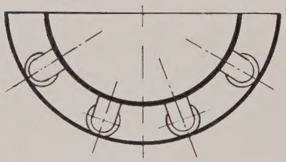
LEVELUX UNITS



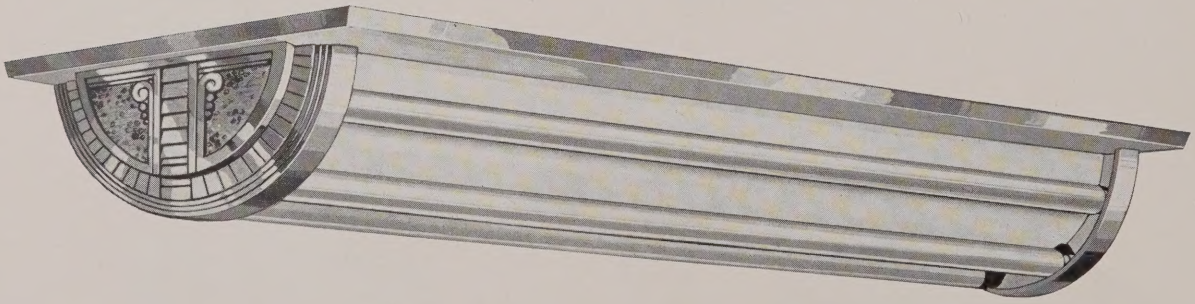
Cat. No.	Mazda F Lamps	Body Dimen.	Suspension O.A.
2426	4—48″—160W	11½″x49¼″x5½″	36″

Finish: Satin Aluminum. **End Castings:** Hi-Lighted.

Reflecting Surface: Matt White.



Section showing lamp positions.

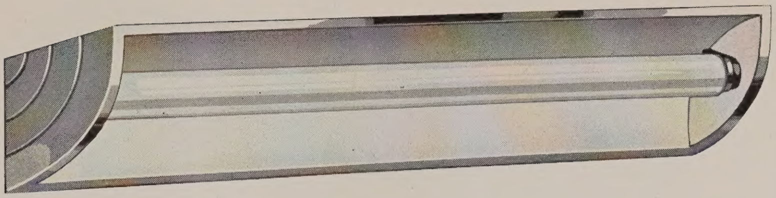


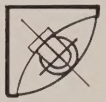
Cat. No.	Mazda F Lamp	Clg. Plate	Depth O.A.
2427	4—24″— 80W	13½″x26¼″	6″
2428	4—48″—160W	13½″x50¼″	6″

Finish: Satin Aluminum. **End Castings:** Hi-Lighted.

Reflecting Surface: Matt White.

SPECIFIC UNITS

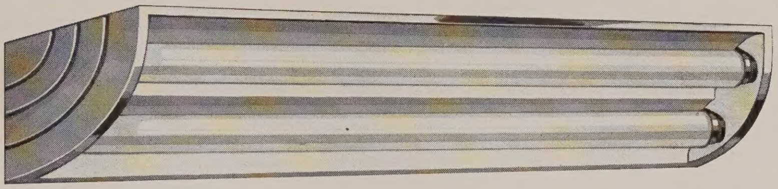


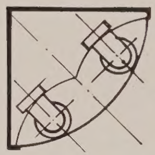


Section of No. 2439

Cat. No.	Mazda F Lamps	Size
2439	1—18″—15W	4¼″x4¼″x18½″
2440	1—24″—20W	4¼″x4¼″x24½″
2441	1—36″—30W	4¼″x4¼″x36½″
2442	1—48″—40W	4¼″x4¼″x48½″

Finish: Satin Aluminum. **Reflector:** Matt White.

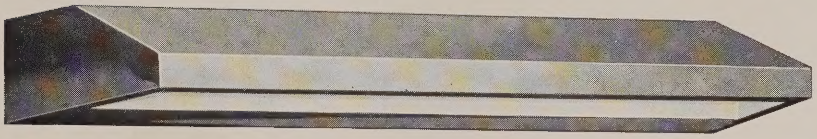


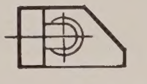


Section of No. 2443

Cat. No.	Mazda F Lamps	Size
2443	2—18″—30W	6″x6″x18½″
2444	2—24″—40W	6″x6″x24½″
2445	2—36″—60W	6″x6″x36½″
2446	2—48″—80W	6″x6″x48½″

Finish: Satin Aluminum. **Reflector:** Matt White.

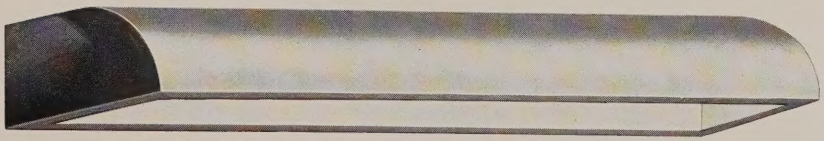


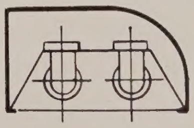


Section of No. 2447

Cat. No.	Mazda F Lamps	Depth	Length	Extends
2447	1—18″—15W	2⅝″	18½″	4½″
2448	1—24″—20W	2⅝″	24½″	4½″
2449	1—36″—30W	2⅝″	36½″	4½″
2450	1—48″—40W	2⅝″	48½″	4½″

Finish: Satin Aluminum. **Reflecting Surface:** Matt White.



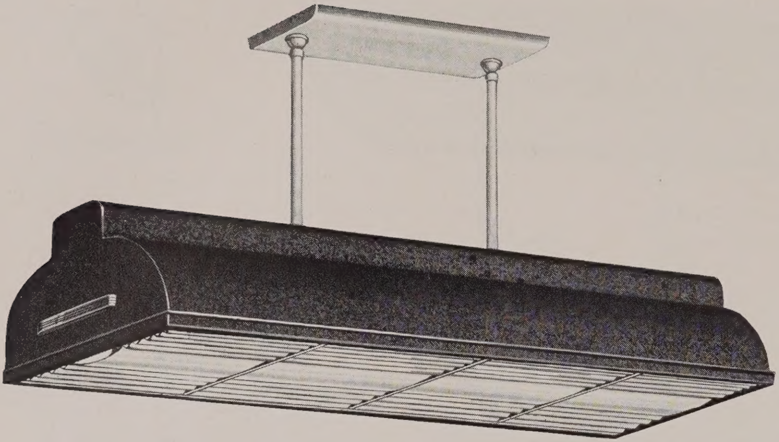


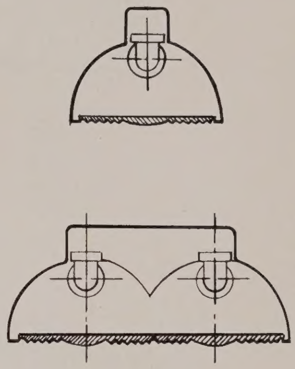
Section of No. 2451

Cat. No.	Mazda F Lamps	Depth	Length	Extends
2451	2—18″—30W	4¾″	18½″	8¼″
2452	2—24″—40W	4¾″	24½″	8¼″
2453	2—36″—60W	4¾″	36½″	8¼″
2454	2—48″—80W	4¾″	48½″	8¼″

Finish: Satin Aluminum. **Reflector:** Matt White.

FRESNEL LENS PANEL SYSTEM



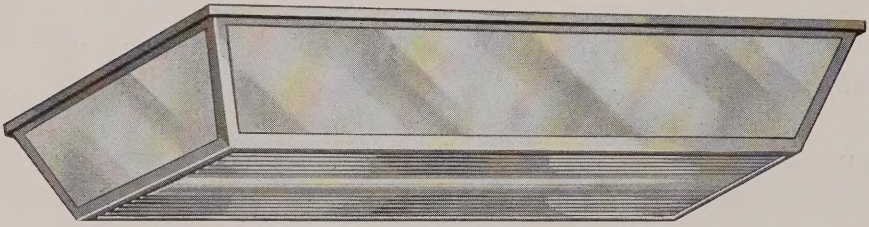


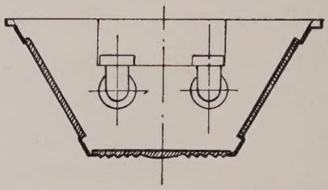
Sections showing one and two-light units.

COUNTER LIGHT

Cat. No.	Madza F Lamps	Lens	Unit Size	Length O.A.
2472	2—48"— 80W	12½"x48"	13½"x50"	6'-0"
2473	1—60"—100W	8½"x60"	10" x62"	6'-0"

Finish: Crackled Black—Polished Chrome Trim or Battleship Gray with Polished Chrome Trim.
Reflector: Matt White.
Glass: Fresnel Lens Panel (Clear face-diffusing back).
Hinged Bottom Door.





Sections showing lamp and ballast positions.

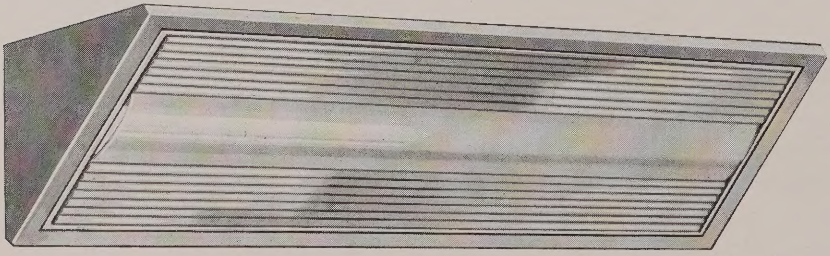
OFFICE LIGHTING

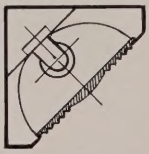
Cat. No.	Mazda F Lamps	Lens	CLG Size
2474	2—48"— 80W	8½"x48"	14"x53½"
2475	1—60"—100W	8½"x60"	14"x65½"
2476	2—60"—200W	8½"x60"	14"x65½"

Finish: Satin Aluminum—Reflecting Surface Aluminized.

Glass: Fresnel Lens Panel (Clear face—diffusing back). **Sides:** Flashed Opal.

Hinged Side.





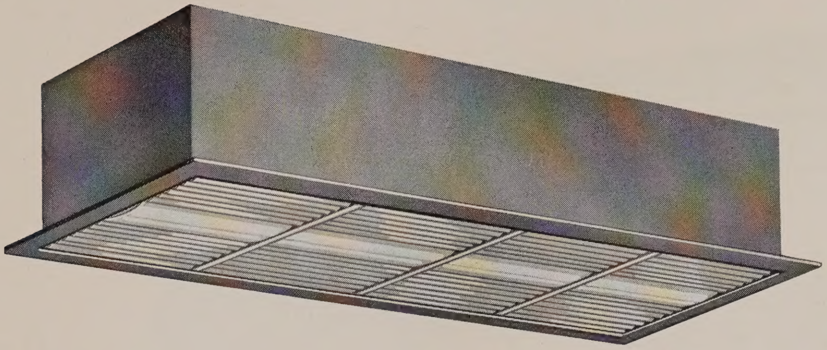
Section showing lamp and reflector positions.

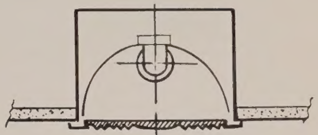
SIDE BAY LIGHTING (CORNER TYPE)

Cat. No.	Mazda F Lamps	Lens	Size
2477	1—48"— 40W	8½"x48"	8"x8"x48½"
2478	1—60"—100W	8¼"x60"	10"x10"x60½"

Finish: Satin Aluminum. **Reflector:** Matt White.
Glass: Fresnel Lens Panel (Clear face—diffusing back).
Hinged Door.

FRESNEL LENS PANEL SYSTEM



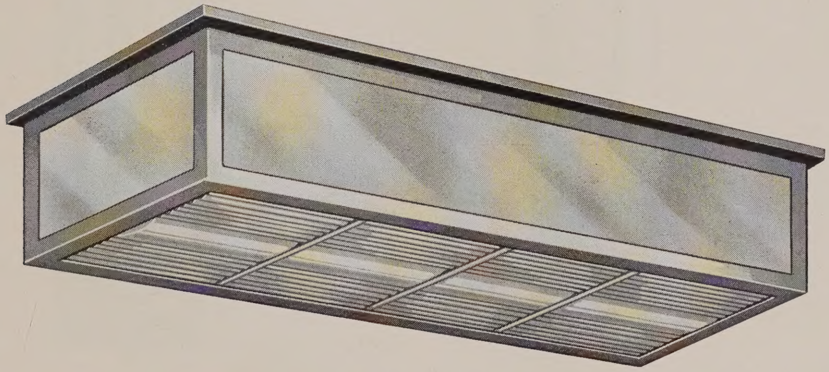


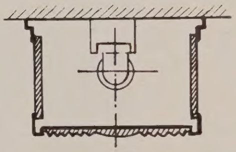
Section showing Recessed type unit.

RECESSED TYPE

Cat. No.	Mazda F Lamps	Lens	Insert	Face Size	Depth
2479	1—48″— 40W	6″x48″	7½″x49½″	9½″x51½″	6½″
2480	2—48″— 80W	12″x48″	13½″x49½″	15½″x51½″	6½″
2481	4—48″—160W	24″x48″	25½″x49½″	27½″x51½″	6½″

Finish: Satin Aluminum. **Reflector:** Matt White.
Glass: Fresnel Lens Panel (Clear face—diffusing back)
Hinged Bottom Door.





Section showing exposed type unit.

EXPOSED TYPE

Cat. No.	Mazda F Lamps	Lens	CLG Size	Depth O. A.
2482	1—48″— 40W	6″x48″	8½″x50″	7″
2483	2—48″— 80W	12″x48″	14″ x50″	7″
2484	4—48″—160W	24″x48″	26″ x50″	7″

Finish: Satin Aluminum—Reflecting Surface Aluminized.
Glass: Fresnel Lens Panel (Clear face—diffusing back). **Sides:** Flashed Opal.
Hinged Side.

CHARACTERISTICS OF FRESNEL LENS PANELS

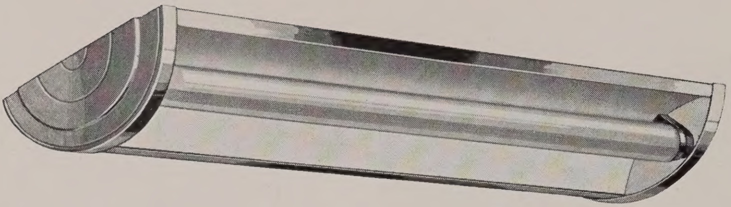
● Special candlepower distribution curves have been omitted owing to the many variables in widespread, concentrating and asymmetric distributions obtainable with the FRESNEL Lens Panel System.

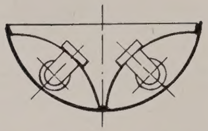
Asymmetric, widespread and concentrating distributions can be had only in a plane normal to the length of the lamp and when specular finished reflectors are used. This inherent limitation is due to the physical form of the Fluorescent light source.

The FRESNEL Lens Panel System has such a wide range of uses that Architects, Engineers and Specification Writers are urged to check with our Illuminating Engineering Department for ideas and latest developments applicable to this type of illumination. Full information concerning special adaptations should be forwarded for analysis and layout.

RIBBED SHEET GLASS: For a diffuse distribution of light, this glass is available on all items illustrated on pages 50 and 51.

SPECIFIC UNITS

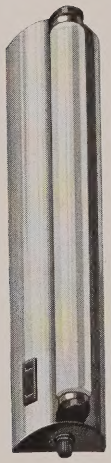


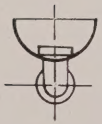


Section showing lamp positions.

Cat. No.	Mazda F Lamps	Clg. Plate O. A.	Depth O. A.
2429	2—24″— 40W	8¼″x25¾″	3½″
2430	2—48″— 80W	8¼″x49¾″	3½″
2431	2—60″—200W	11″ x61¾″	6¼″

Finish: Satin Aluminum. **Reflectors:** Matt White.





SECTION

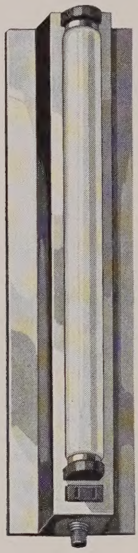
Cat. No.	Mazda F Lamps	Length	Width
2432	1—18″—15W	18″	3½″
2433	1—24″—20W	24″	3½″

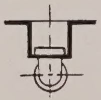
LESS Pin Switch and Convenience Outlet

2432C	1—18″—15W	18″	3½″
2433C	1—24″—20W	24″	3½″

WITH Pin Switch and Convenience Outlet

Finish: Polished Chrome.





SECTION

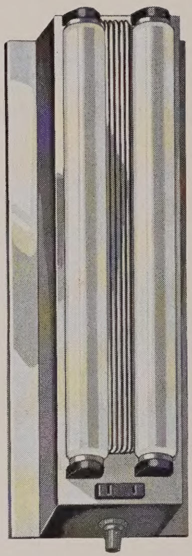
Cat. No.	Mazda F Lamps	Length	Width
2434	1—18″—15W	20″	4″
2435	1—24″—20W	26″	4″

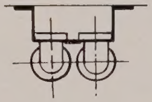
LESS Pin Switch and Convenience Outlet

2434C	1—18″—15W	20″	4″
2435C	1—24″—20W	26″	4″

WITH Pin Switch and Convenience Outlet

Finish: Polished Chrome.





SECTION

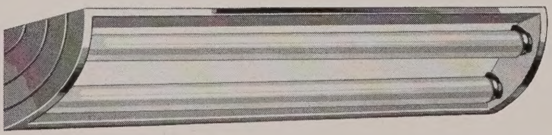
Cat. No.	Mazda F Lamps	Length	Width
2436	2—18″—30W	20″	5¼″
2437	2—24″—40W	26″	6¼″

LESS Pin Switch and Convenience Outlet

2436C	2—18″—30W	20″	5¼″
2437C	2—24″—40W	26″	6¼″

WITH Pin Switch and Convenience Outlet

Finish: Polished Chrome.

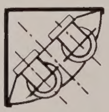


Cat. No.	Madza F Lamps	Size
2438	2—18″—30W	4″x4″x18½″

WITH Pin Switch.

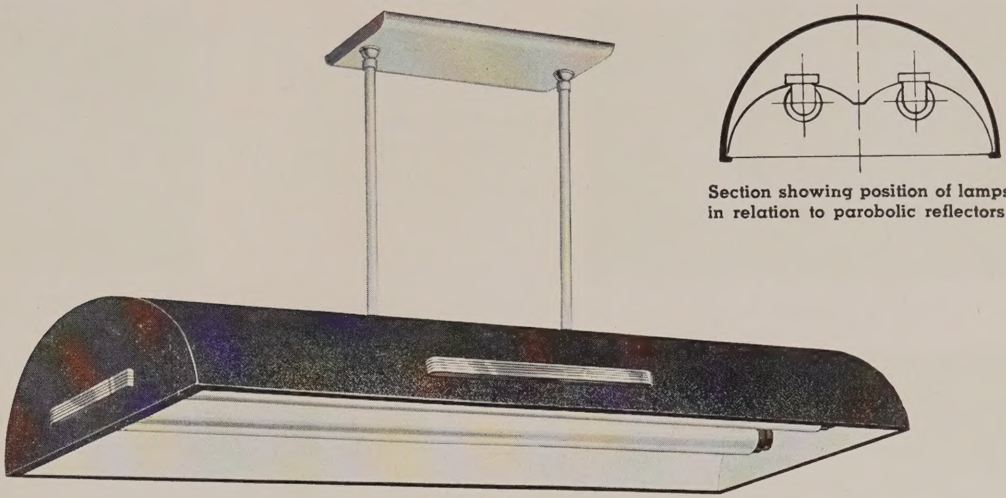
Finish: Polished Chrome.

Reflector: Matt White.



Section showing lamp positions. Starter switches located at end of unit.

AMCOLUX UNITS



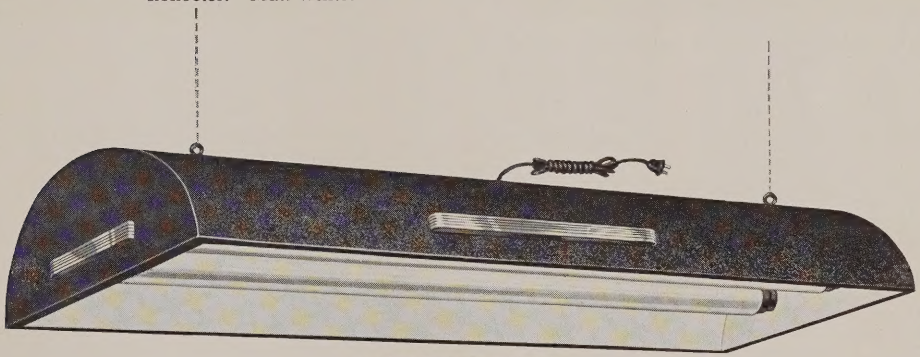
Section showing position of lamps in relation to parobolic reflectors.

AMCOLUX

Cat. No.	Mazda F Lamps	Unit Size	Length O.A.
2455	2—48″—80W	12¼″x48¼″x6″	36″

Finish: Crackled Black—Polished Chrome Trim or Battleship Gray with Polished Chrome Trim.

Reflector: Matt White.



AMCOLUX PORTABLE

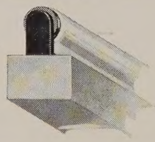
Cat. No.	Mazda F Lamps	Unit Size
2456	2—48″—80W	12¼″x48¼″x6″

Finish: Crackled Black—Polished Chrome Trim or Battleship Gray with Polished Chrome Trim.

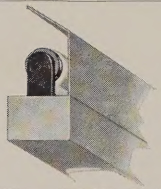
Reflector: Matt White.

Note: Portable unit furnished with 8 ft. cord and plug and 2—6 ft. lengths of jack chain.

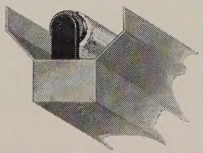
UNIT WIRING CHANNELS



Cat. No.	Mazda F Lamps	Wireway Dimen.	Length
2457	1—18″— 15W	1¾″x2½″	19″
2458	1—24″— 20W	1¾″x2½″	25″
2459	1—36″— 30W	1¾″x2½″	37″
2460	1—48″— 40W	1¾″x2½″	49″
2461	1—60″—100W	2½″x3½″	61″



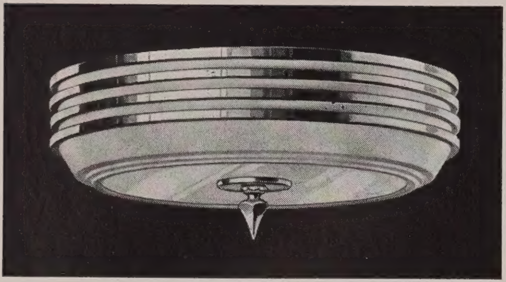
Cat. No.	Mazda F Lamps	Height O. A.	Width	Length
2462	1—18″— 15W	4½″	2½″	19″
2463	1—24″— 20W	4½″	2½″	25″
2464	1—36″— 30W	4½″	2½″	37″
2465	1—48″— 40W	4½″	2½″	49″
2466	1—60″—100W	5⅞″	3½″	61″



Cat. No.	Mazda F Lamps	Height O. A.	Width	Length
2467	1—18″— 15W	3¾″	4¼″	19″
2468	1—24″— 20W	3¾″	4¼″	25″
2469	1—36″— 30W	3¾″	4¼″	37″
2470	1—48″— 40W	3¾″	4¼″	49″
2471	1—60″—100W	4⅞″	5¼″	61″

Finish: Aluminized. **Reflectors:** Matt White. **Knockouts Provided—Ends Removable.**

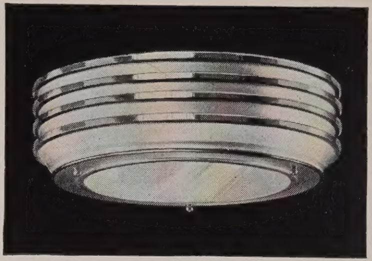
SPECIAL LOCATION LIGHTING



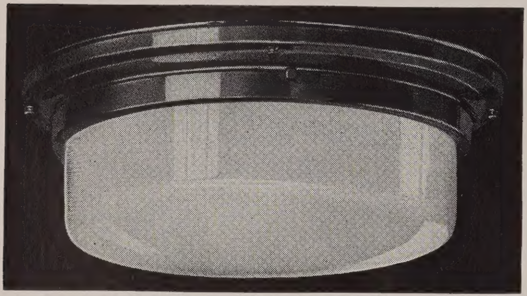
No. 1763L

	Dia.	O.A.	Lts.
No. 1763L	15″	6″	2-150W
No. 1746L	11¾″	3⅞″	2-100W

Standard Finishes: Ivory and Gold, Goldtint, Silvertint, Empire White. Luxlite Glass Bottom Plate.



No. 1746L

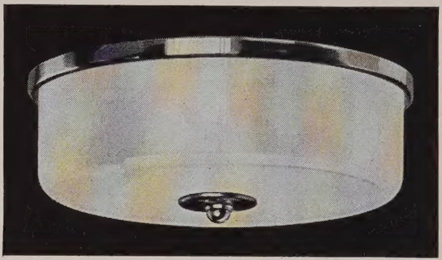


Two-piece hinged band with white Monax glass.

No. 216	Glass 12″x4″	Band 14″ Dia.	2 Soc.	2-100W
No. 217	Glass 10″x3″	Band 12″ Dia.	2 Soc.	2-100W
No. 218	Glass 14″x5″	Band 16″ Dia.	3 Soc.	3-100W

Made of 22GA Brass—Complete with Reflector Plate and Cross Bar

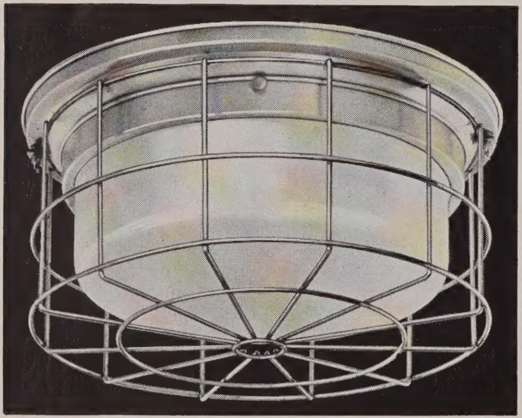
Finish: Statuary Bronze—Pewter—Chromium.



One-piece shallow band with white Monax glass.

No. 1738	Glass 8″x2½″	Band 8½″ Dia.	2 Soc.	2-40W
No. 1739	Glass 10″x3″	Band 10½″ Dia.	2 Soc.	2-100W
No. 1808	Glass 12″x4″	Band 12½″ Dia.	2 Soc.	2-100W
No. 1809	Glass 14″x4½″	Band 14½″ Dia.	3-Soc.	3-100W

Finish: Statuary Bronze—Pewter—Chromium.

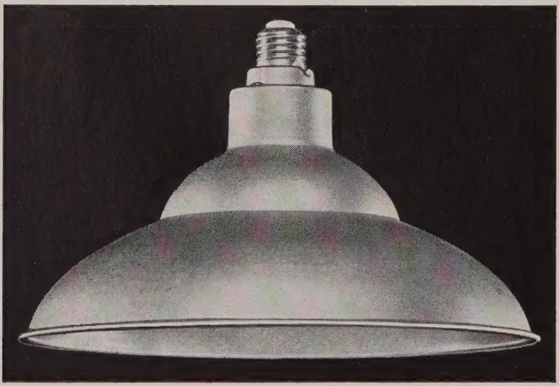


Two-piece hinged band with white Monax glass—Rugged electric welded wire guard.

No. 216G	Glass 12″ x 4″	Band 14″ Dia.	Guarded 9″ O. A.	2-100W
No. 217G	Glass 10″ x 3″	Band 12″ Dia.	Guarded 8½″ O. A.	2-100W
No. 218G	Glass 14″ x 5″	Band 16″ Dia.	Guarded 9½″ O. A.	3-100W

Made of 22 Ga. Brass—Complete with reflector plate and cross bar.

Finish: Statuary Bronze—Pewter—Chrome.



No. 1842 Reflectolite

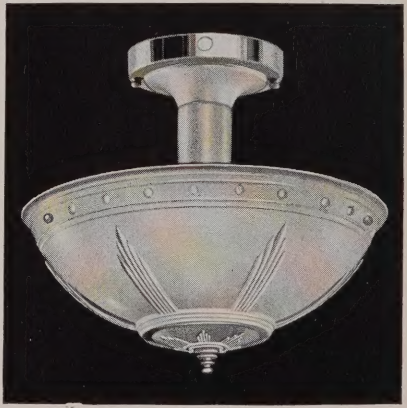
The Reflectolite screws into a socket the same as an electric light bulb.

No. 1842 Reflectolite 10¾″ Dia. 6½″ O. A. 150W

Finish: Gray Exterior, Amlux Interior Reflecting Surface.

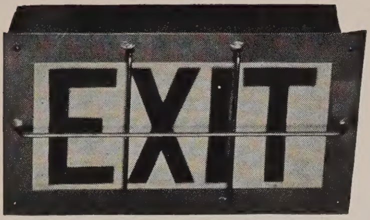
No. 1829 12″ Dia. 10″ O. A. 150W

Finish: Silvertint.



No. 1829 Plastic Bowl

SPECIAL LOCATION LIGHTING



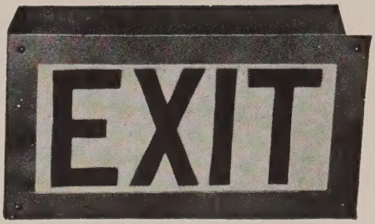
Cat. No. 700—Flush Type Guarded
Cat. No. 115—Surface Type Guarded

Standard Glass: Red letters on opal glass.

Optional Glass: White letters on red, green or black background. Green or black letters on white background.

Boxes have knockouts for ½″ conduit.

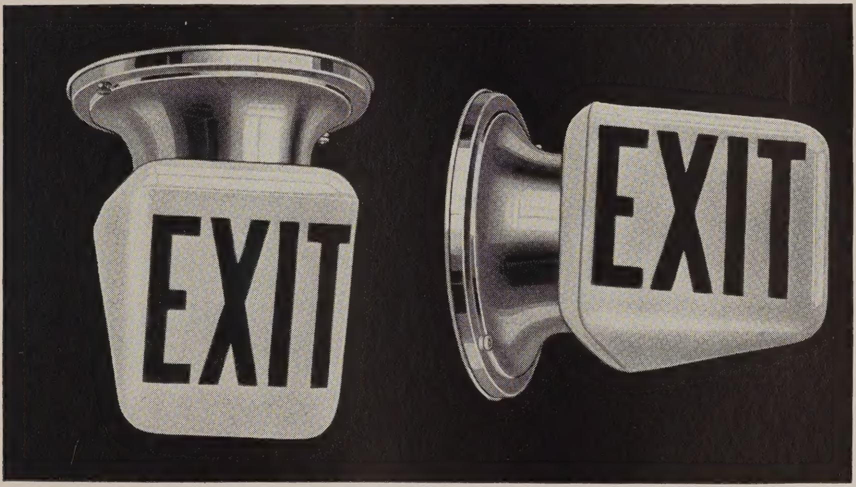
Flush type fronts attach with 4 screws.



Cat. No. 722—Flush Type Plain
Cat. No. 117—Surface Type Plain

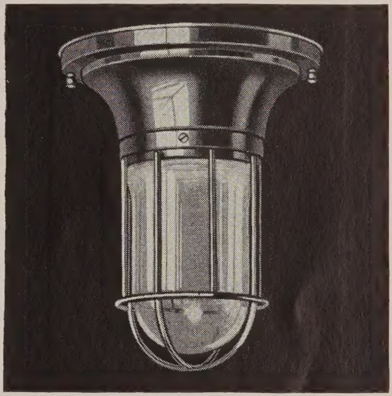
Catalog No.	Type	Size Letters	Overall Size	Insert Size
115-5	Surface Type Guarded—Single Face	5″	12″x6″ x3″	
115-6	Surface Type Guarded—Single Face	6″	12″x7¾″x3″	
117-5	Surface Type Plain—Single Face	5″	12″x6″ x3″	
117-6	Surface Type Plain—Single Face	6″	12″x7¾″x3″	
700-5	Flush Type Guarded—Single Face	5″	14″x8″ x3″	12½″x6½″x3″
700-6	Flush Type Guarded—Single Face	6″	14″x9¾″x3″	12½″x8¼″x3″
722-5	Flush Type Plain—Single Face	5″	14″x8″ x3″	12½″x6½″x3″
722-6	Flush Type Plain—Single Face	6″	14″x9¾″x3″	12½″x8¼″x3″

Standard Finish: Black.



No. 210
Ceiling exit, 4″ red lettering on two sides. Canopy 7½″ diam. 8¾″ deep overall.
Finish: Statuary Bronze—Pewter—Chromium.

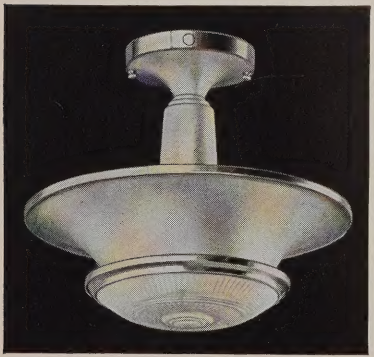
No. 209
Exit bracket, 4″ red lettering on two sides. Canopy 7½″ diam. Extends 8¾″ overall.
Finish: Statuary Bronze—Pewter—Chromium.



No. 201 Vaporproof Unit

No. 201 60-watt unit—9¼″ deep—7½″ diam. Canopy—Wired complete.

Standard Finishes: Copper, Black, White, with clear glass jar.

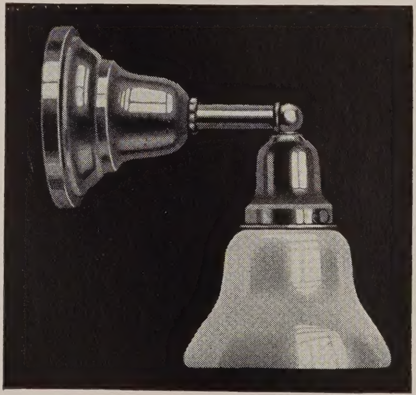


No. 1715

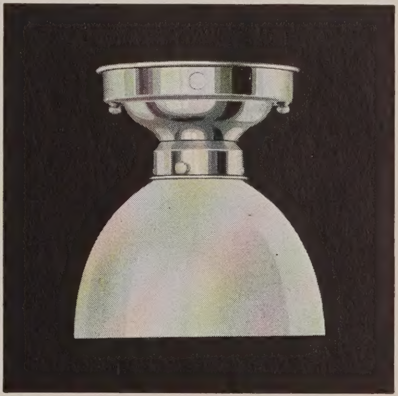
Semi-indirect luminous bowl, white Monax glass bottom plate.

No. 1715 13″ Dia. 12″ O. A. 150W

Finishes: Chromtint, Durocreme, Durocreme and Silver,



No. 203 Bracket
No. 203—2¼″ Fitter, 4½″ white glass shade. Backplate 5¼″ diam. Made of 22 gauge brass.
Finish: Statuary Bronze—Pewter—Chromium.



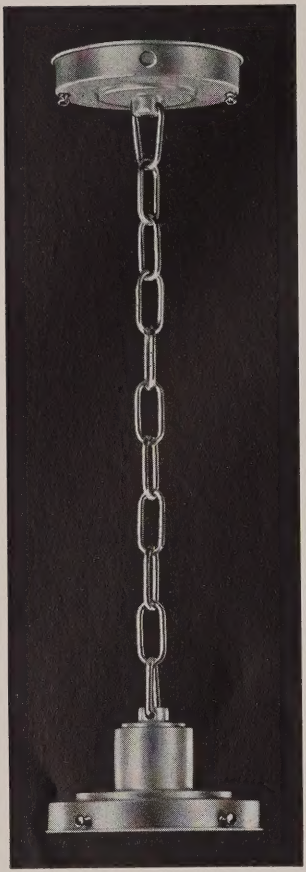
No. 100

Canopy Dia. 5″, Fitter 2¼″, Glass 6″, White Opal Glass Shade—Open Bottom

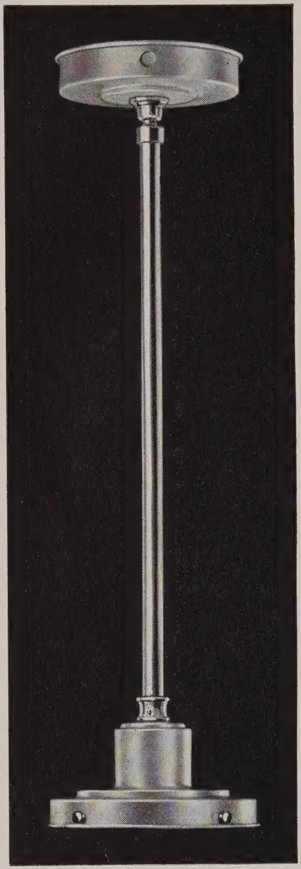
Finish: Statuary Bronze, Pewter, Chromium.

THE MONITOR LINE

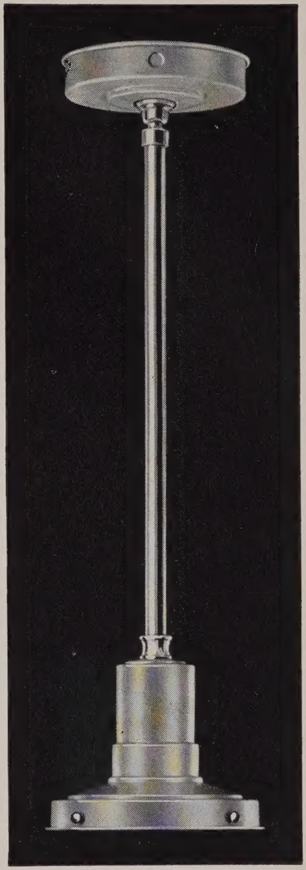
Twenty Gauge Aluminum Hangers for Enclosing Glassware



Strap Canopy Pendant
2302—4″ Fitter Med. 30″ O. A.
2303—6″ Fitter Med. 30″ O. A.
2304—6″ Fitter Mog. 30″ O. A.

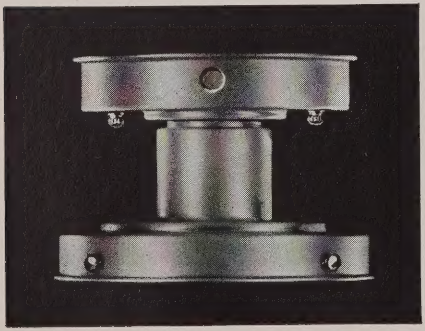


⅝″ Swivel Stem Pendant
2305—4″ Fitter Med. 24″ O. A.
2306—6″ Fitter Med. 24″ O. A.
2307—6″ Fitter Mog. 24″ O. A.



Deep Holder ⅝″ Swivel Stem Pendant
2311—4″ Fitter Med. 24″ O. A.
2312—6″ Fitter Med. 24″ O. A.
2313—6″ Fitter Mog. 24″ O. A.

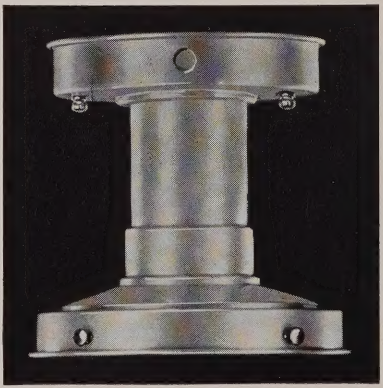
Finish All Equipment This Page:— Etched Aluminum.



Ceiling Collar
2308—4″ Fitter Med. 4½″ O. A.
2309—6″ Fitter Med. 4½″ O. A.
2310—6″ Fitter Mog. 4½″ O. A.

Holders have Amlux interior reflecting surface for highest lighting efficiencies.

All hangers listed on this page are equipped with two half-inch twenty-two gauge Brass stationary Arms that allow for expansion of glassware and two set screws,



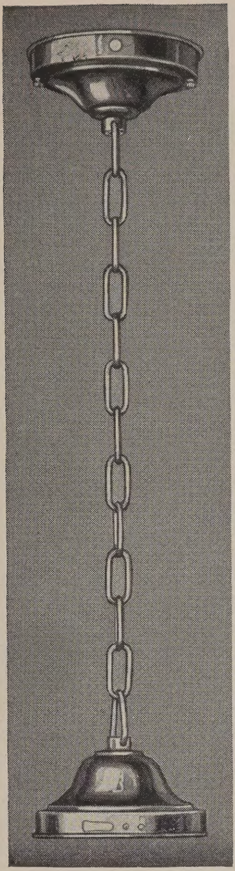
Deep Fitter Ceiling Collar
2314—4″ Fitter Med. 6½″ O. A.
2315—6″ Fitter Med. 6½″ O. A.
2316—6″ Fitter Mog. 6½″ O. A.

Holders and canopies are made of 20 gauge Aluminum. The stems are ⅝″ 16 gauge brass finished polished chrome. The chain is 1½″ steel link finished polished cadmium.

THE ECONOMY LINE

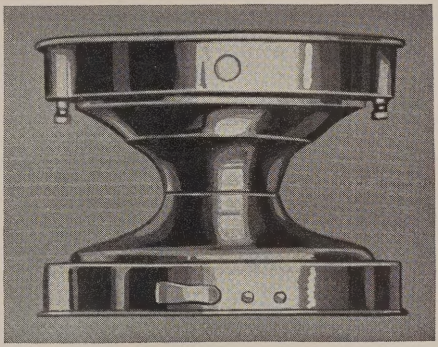
External Cushion Type Support Safety Hanger Equipment for Enclosing Glassware

Standard Finish: Statuary Bronze.
Optional Finish: Pewter.
Holders aluminized inside.



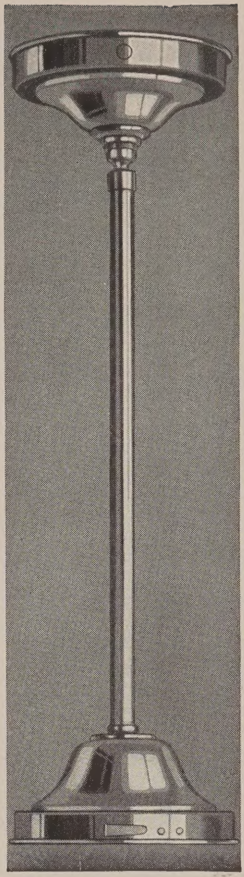
Strap Canopy Pendant

No. 1140—4″ Fitter Medium 30″ O. A.
No. 1160—6″ Fitter Medium 30″ O. A.
No. 1160M—6″ Fitter Mogul 30″ O. A.



Ceiling Collar

No. 1240—4″ Fitter Medium 4½″ O. A.
No. 1260—6″ Fitter Medium 4¾″ O. A.
No. 1260M—6″ Fitter Mogul 4¾″ O. A.

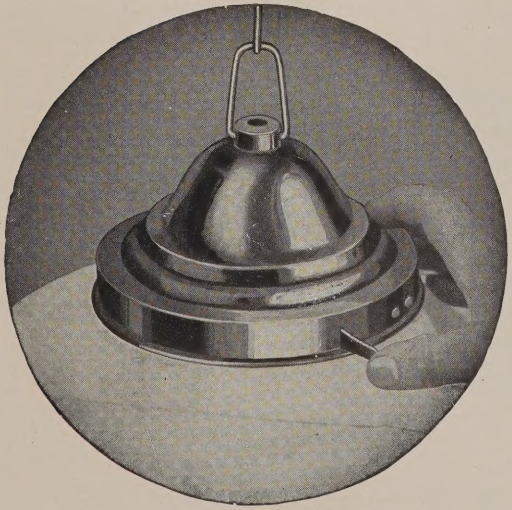


⅝″ Swivel Stem Pendant

1143S —4″ Fitter Medium 24″ O. A.
1163S —6″ Fitter Medium 24″ O. A.
1163SM—6″ Fitter Mogul 24″ O. A.

This line made of heavy gauge copper plated steel.

Also available in 22 gauge brass.

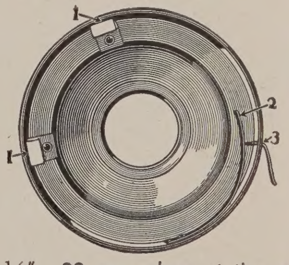


Close lever to lock glass in position.
Simple as clicking a camera.

EXTERNAL CUSHION TYPE ECONOMY LINE SAFETY HOLDERS

A safe, simple and foolproof method for holding enclosing glassware. They are designed to form a cushion around the neck of the glassware that allows for expansion and contraction, **eliminating the possibility of globe breakage, yet permitting absolute EASE and SPEED in the installation of glassware.**

NOTE THE SIMPLICITY OF PARTS

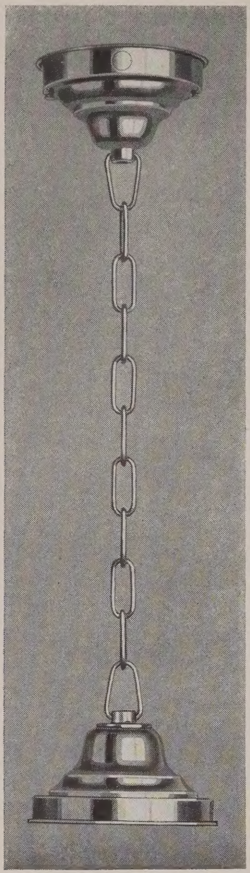


(1) ½″ x 22 gauge brass stationary arms and
(2) ½″ x 3″—20 gauge spring, acts as a cushion around neck of glass.
(3) Lever 18 gauge brass.

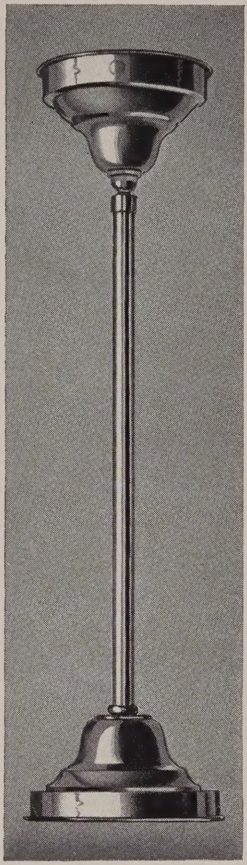
All that is necessary to lock glass in position is to close lever (3) which expands spring (2), simple as clicking a camera.

THE SENTINEL LINE

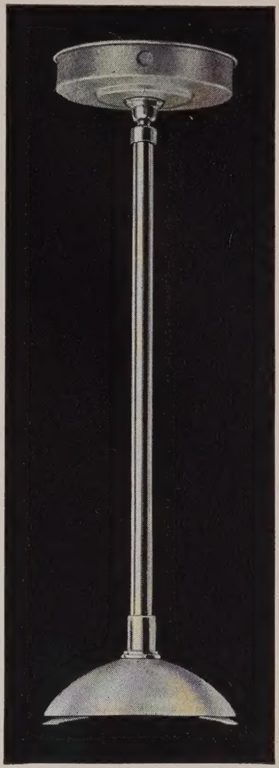
Internal Holding Type Safety Hanger Equipment For Lipless Or Standard Fitter Glassware



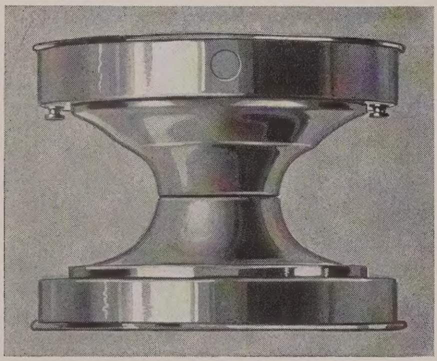
Strap Canopy Pendant
1640—4″ Fitter Med. 30″ O.A.
1641—6″ Fitter Med. 30″ O.A.
1642—64 Fitter Mog. 30″ O.A.



⅝″ Swivel Stem Pendant
1652—4″ Fitter Med. 24″ O.A.
1653—6″ Fitter Med. 24″ O.A.
1654—6″ Fitter Mog. 24″ O.A.



⅝″ Swivel Stem Pendant
2300—6″ Fitter Med. 24″ O.A.
2301—6″ Fitter Mog. 24″ O.A.
2317—6″ Fitter Med. 7″ O.A.
2318—6″ Fitter Mog. 7″ O.A.



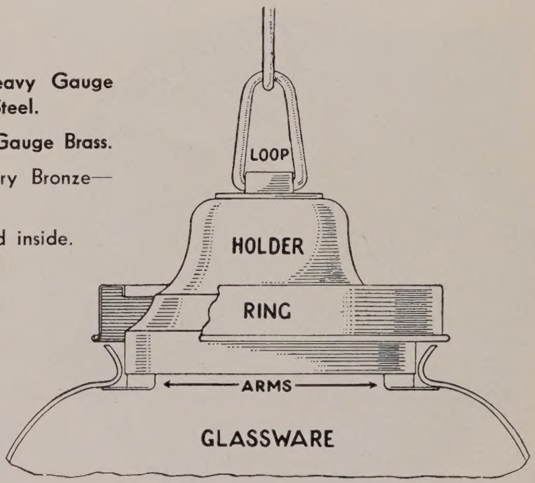
Ceiling Collar
1655—4″ Fitter Med. 4½″ O.A.
1656—6″ Fitter Med. 4¾″ O.A.
1657—6″ Fitter Mog. 4¾″ O.A.

This line made of Heavy Gauge Copper Plated Steel.

Also available in 22 Gauge Brass.

Standard Finish: Statuary Bronze—Pewter

Holders Aluminized inside.

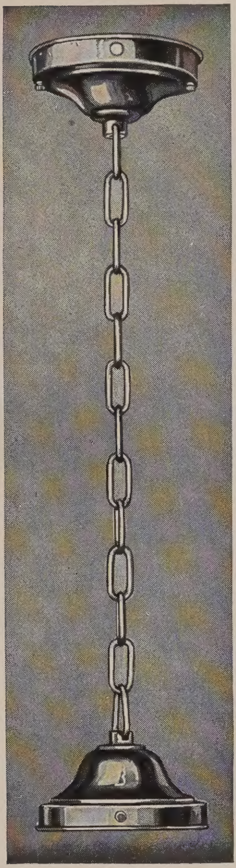


To install glassware, merely slip the glass over the two three-inch arms on holder and lower self-aligning ring which makes the unit absolutely foolproof and dustproof. Nothing mechanical to operate.

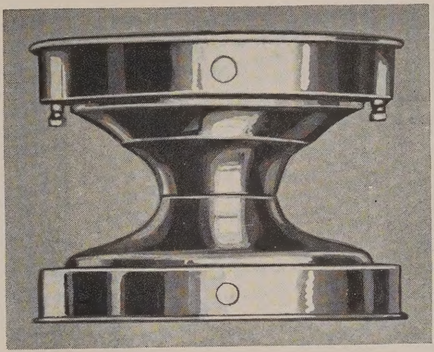
THE MASTER LINE

Set Screw Support Hanger Equipment for Enclosing Glassware

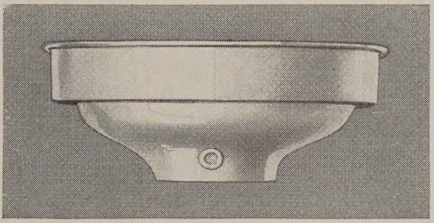
Master Line Hangers equipped with One-Screw Semi-Safety type holders. This consists of two half-inch twenty-two gauge Brass stationary Arms that allow for expansion of glassware, and one set screw. This feature insures safety and quicker installation of glassware.



Strap Canopy Pendant
No. 2141—4″ Fitter Medium 30″ O. A.
No. 2161—6″ Fitter Medium 30″ O. A.
No. 2161M—6″ Fitter Mogul 30″ O. A.

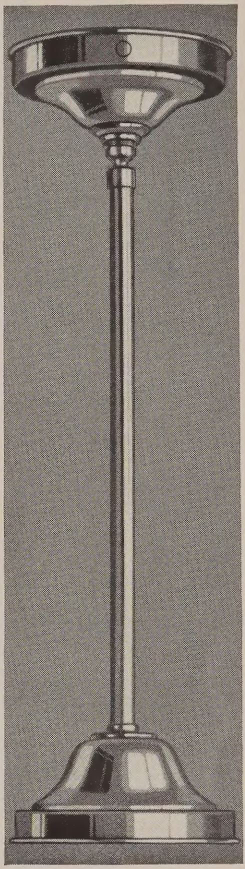


Ceiling Collar
No. 2241—4″ Fitter Medium 4½″ O. A.
No. 2261—6″ Fitter Medium 4¾″ O. A.
No. 2261M—6″ Fitter Mogul 4¾″ O. A.

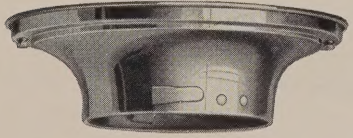


No. 2110 Closet Light is 5¼″ diam. at ceiling and 2⅛″ deep—furnished complete with Keyless Receptacle and Strap, Screws and Nuts.
No. 2109—Furnished with Pull-Chain

This line made of heavy gauge copper plated steel
Also available in 22 gauge brass.



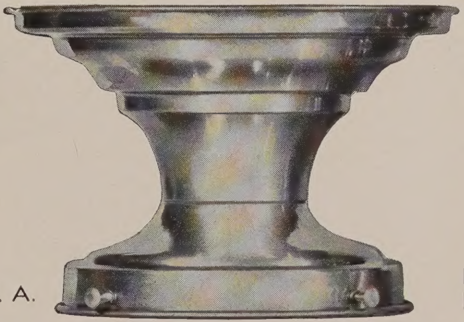
⅝″ Swivel Stem Pendant
2146S —4″ Fitter Medium 24″ O. A.
2166S —6″ Fitter Medium 24″ O. A.
2166SM—6″ Fitter Mogul 24″ O. A.



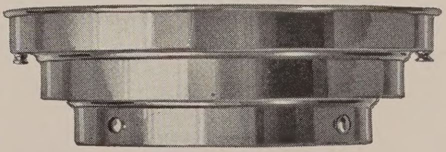
Semi-Safety Ceiling Band
Made of 22 Ga. Brass

No. 47
7½″ Dia. on 4″ Fitter Medium 2¼″ O. A.
No. 48
9″ Dia. on 6″ Fitter Medium 2¼″ O. A.

Furnished with Two Screws and Two Brass Arms.



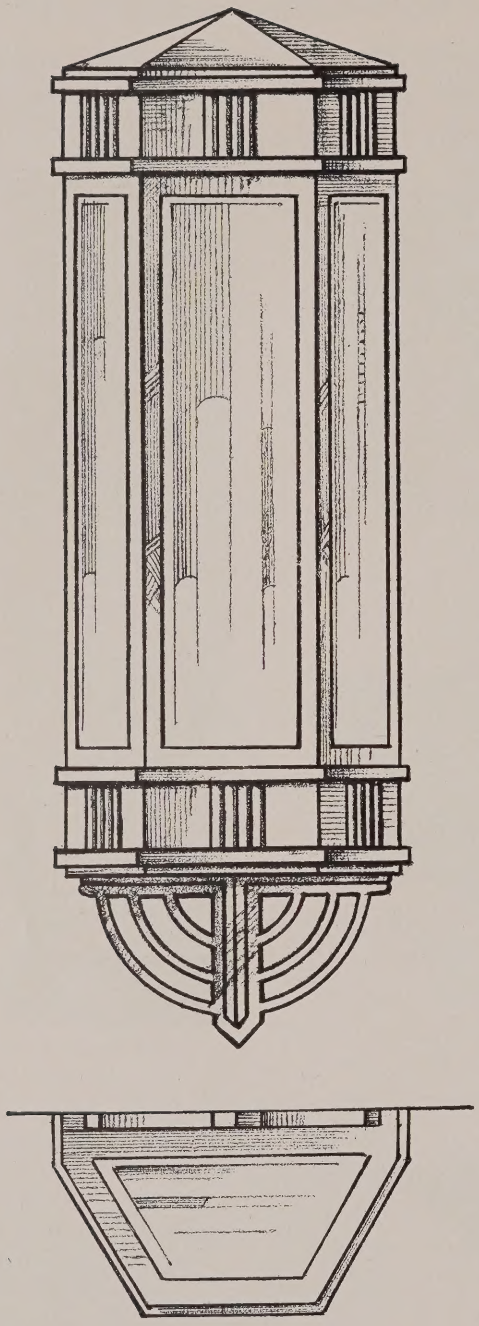
8″ Diam. Canopy Ceiling Collar
Made of 22 Ga. Brass
No. 5042 4″ Fitter Medium 5½″ O. A.
No. 5062 6″ Fitter Medium 5½″ O. A.
No. 5062M 6″ Fitter Mogul 5½″ O. A.
Furnished with Two Screws and Two Brass Arms.



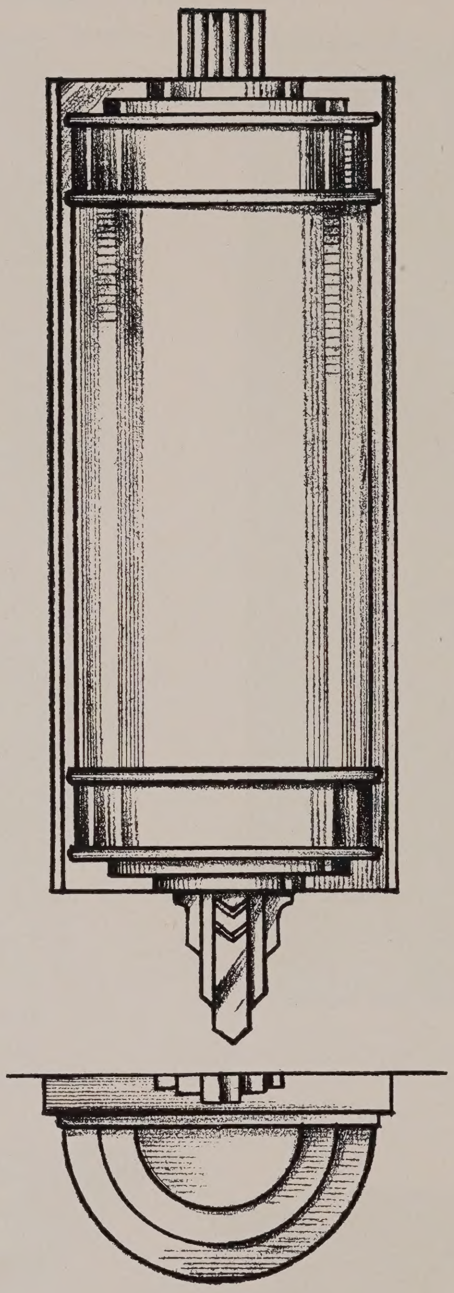
Ceiling Band
Made of 22 Ga. Brass
No. 2004 6″ Dia. on 4″ Fitter Medium 2½″ O. A.
No. 2006 8″ Dia. on 6″ Fitter Medium 3″ O. A.
Furnished with Two Screws and Two Brass Arms.

Standard Finish All Equipment this Page: Statuary Bronze—Pewter. **All Holders Aluminized Inside.**

EXTERIOR LIGHTING



No. 1868 Wall Pocket



No. 1872 Half Cylinder Pocket

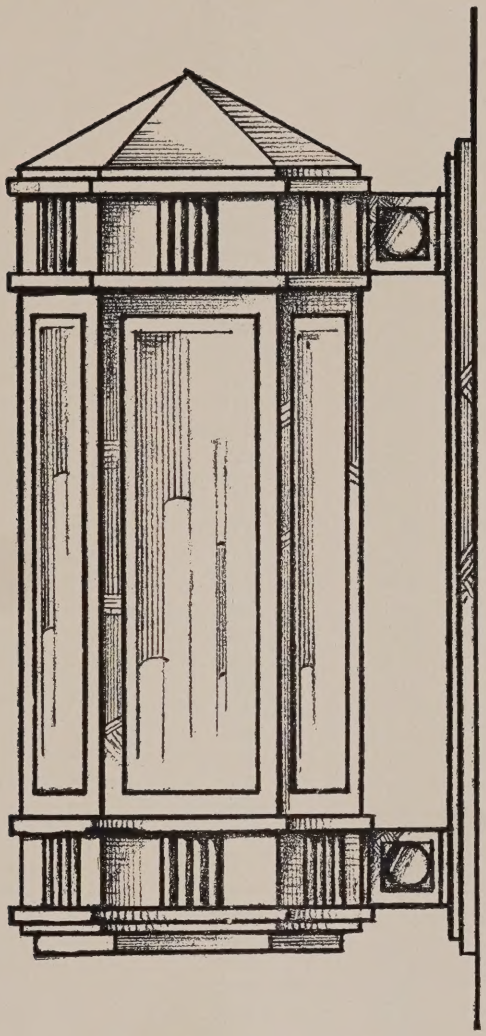
Catalog No.	Lights	Body Dia.	Length O. A.	Extension
1868	2-75W	10″	31″	6″
1869	3-75W	10″	38″	6″

Finish: Standard Bronze.
Glass: Flashed Opal.

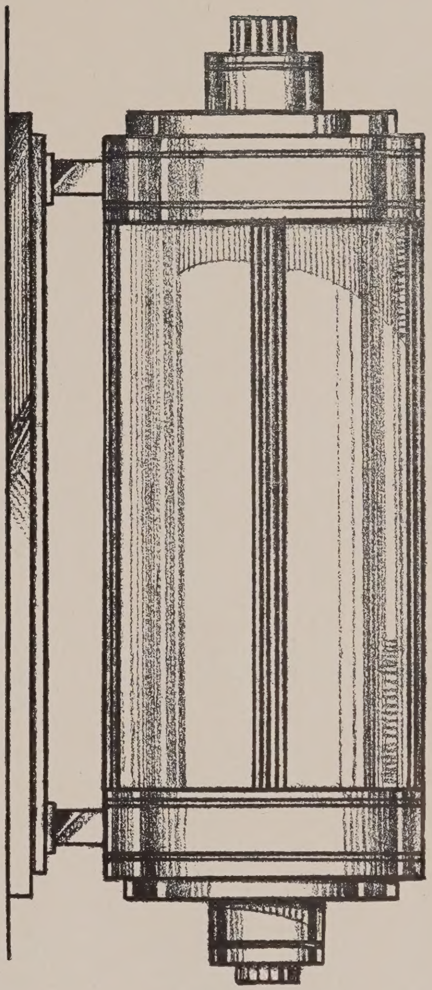
Catalog No.	Lights	Width	Length O. A.	Extension
1872	2-40W	7¼″	24″	6″x12″ Half Cylinder
1873	2-75W	9¼″	28″	8″x16″ Half Cylinder

Finish: Standard Bronze.
Glass: Opal.

EXTERIOR LIGHTING



No. 1870 Hexagon Bracket Lantern



No. 1874 Cylinder Bracket Lantern

Catalog No.	Lights	Body Dia.	Length O. A	Extension	Back Plate Size
1870	1-150W	9″	23½″	11″	4¼″x22″
1871	1-200W	11″	30″	12¾″	4¼″x28″

Finish: Standard Bronze.

Glass: Flashed Opal.

Catalog No.	Lights	Glass Size	Extension	Back Plate Size
1874	1-100W	6″x16″	9″	4¼″x21″
1875	1-200W	8″x16″	11″	4¼″x21″

Finish: Standard Bronze.

Glass: Opal.

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ALL EQUIPMENT LISTED IN THIS CATALOG IS APPROVED BY THE UNDERWRITERS' LABORATORIES, INC., AND IS LABELED AS EVIDENCE THEREOF.

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Characteristics of Glass in Art Metal Equipment

MONAX is a single layer, homogeneous glass.

DENAX is a dense, highly reflecting solid opal glass reflecting the greatest percentage of impinging light yet at the same time transmitting a small amount, both being highly diffused. Has low surface brightness. Has constant reflection factor of 83%. No deterioration. This glass lights just off white more to an ivory tone.

HILUX has same characteristics as DENAX from the standpoint of efficient reflection, high diffusion and low surface brightness. The material difference being that when lighted this glass has a whiter appearance than DENAX.

WIDELITE, optical control lense spreading the downward directed light over a large area. The prism design of this lense lowers brightness from average viewing angles. Highly efficient for light control.

FLASHED OPAL, a cased glass composed of two or more layers of different glasses, a clear transparent layer to which is added a layer of opal or opalescent glass. Its characteristic is excellent diffusion and uniform appearance when lighted.

Reflecting Surfaces of Amlux Aluminum

AMLUX finish is a diffuse surface finish that has an exceptionally high reflection factor. It is produced by the processing of the aluminum in exclusive chemical solutions at 210 degrees Fahrenheit. This processing removes any impurities that may be in the aluminum and produces a diffuse or matte finish which is a most desirable metal reflecting surface.

AMLUX will retain its original high reflectivity if a mild soap and water is used to clean the surface whenever it may be necessary. Do not use any abrasive for this tends to destroy the reflecting surface.

Exterior Finishes of Silvertint or Goldtint

Silvertint is a finish closely resembling satin and polished silver.

Goldtint is similar to an exceptionally light bronze finish, resembling Bank Bronze in tone.

Both of these finishes were developed by Art Metal and are found only in Art Metal Lighting Equipment.

A Partial List of Companies* that have installed Art Metal Lighting Equipment

Adolphus Hotel, Dallas, Texas
Albany Hospital, Albany, New York
Albiani's, Boston, Mass.
Archer Daniels Midland Company, St. Paul, Minn.
Archer Daniels Midland Company, Minneapolis, Minn.
Aulsbrook Company, Detroit, Mich.
Walter Baker Chocolate Mills, Milton, Mass.
Baldwin Piano Company, Pittsburgh, Pa.
Belmont Hospital, Worcester, Mass.
Bendix Corporation, South Bend, Ind.
Biggs Memorial Hospital, Ithaca, N. Y.
Boston College High School, Boston, Mass.
Capitol Theatre Building, Worcester, Mass.
Church of Christ, Fort Wayne, Ind.
Chrysler Motors (Air Temp. Division), Des Moines, Ia.
Chrysler Corporation (De Soto Division), Detroit, Mich.
Children's State Home, Casper, Wyoming
C. I. A. College, Denton, Texas
City Hall, Peoria, Illinois
Clinton Town Hall, Clinton, Mass.
Colt's Patent Fire Arms Company, Hartford, Conn.
Colonnade Company, New York and others
Columbia National Life Insurance Co., Boston, Mass.
Columbia School, Hammond, Ind.
Commodore Perry Hotel (Private Suites), Toledo, Ohio
Consolidated Laundries, Brooklyn, N. Y.
Detroit City Schools, Detroit, Mich.
Dewey-Almy Chemical Company, Cambridge, Mass.
Durango Junior High, Durango, Wyoming
Andrew Dutton Company, Boston, Mass.
Eastman Kodak Company, Rochester, N. Y.
E. W. Edwards & Sons, Syracuse, N. Y.
Elks Club, Tonawanda, N. Y.
Engineers Club, Boston, Mass.
Fairfax Hotel, Buffalo, N. Y.
Farmers & Mechanics Savings Bank, Minneapolis, Minn.
First National Stores, Boston, Mass.
F. W. Fitch Company, Des Moines, Ia.
Fleming Building, Des Moines, Ia.
Flynn Building, Des Moines, Ia.
Franklin-Baker Company, Hoboken, N. J.
General Foods Building, New York City, N. Y.
General Sea Foods Company, Boston, Mass.
Genesee Building, Buffalo, N. Y.
Gilman Fanfold Company, Niagara Falls, N. Y.
Glenville Hospital, Cleveland, Ohio
Golden Eagle Dry Goods Co., Denver, Colorado
Governor Clinton Hotel, Kingston, New York
Great Lakes Naval Training Station, Great Lakes, Ill.
Julian Goldman's Stores, Syracuse, N. Y.
Government Printing Office (Cafeteria), Washington, D. C.
Hammond Civic Auditorium, Hammond, Indiana
Harvard College (School of Biology), Cambridge, Mass.
Hercules Powder Co., Wilmington, Del.
Holy Cross Hospital, Salt Lake City, Utah
Hospital Building, New Mexico Asylum for Deaf & Dumb,
  Santa Fe, New Mexico
Hotel Darling, Wilmington, Del.
Hurley Machine Company, Cicero, Ill.
Insurance Building, Omaha, Nebr.
Intermountain Clinic, Salt Lake City, Utah
Investors Syndicate, Minneapolis, Minn.
Iowa-Des Moines National Bank Building, Des Moines, Ia.
James Andrew Jackson Junior High School, Pasadena, Tex.
The Johnson Store, Bradford, Pa.
Joyce Hotel (Lobby), Colorado Springs, Colorado
Kapps Hotel, Rensselaer, New York
Kerwin's Department Store, Framingham Center, Mass.
K. L. Z. Broadcasting Studios, Denver, Colorado
K. L. Z. Transmitter Station, Englewood, Colorado
Laner Furniture Company, Rochester, N. Y.
Leeman Auto Company, Denver Col.
Libby-Owens-Ford Glass Company, Toledo, Ohio
Lifkin Stores, Easton, Pa.
Liquid Carbonic Company, Minneapolis, Minnesota
Lykes Brothers Insurance Co., Tampa, Fla.
Mansion House, N. Adams, Mass.
Marquette Hotel, Peoria, Ill.
Melrose Hotel, Dallas, Texas
Midland Steel Company, Detroit, Mich.
Ministers Life & Casualty Company, Minneapolis, Minn.
Minnesota National Bank, Duluth, Minn.
Monterey Hotel, Asbury Park, N. J.
Municipal Tuberculosis Sanitarium, Chicago, Illinois
National Automotive Fibres, Inc., Detroit, Michigan
National Grinding Wheel Co., North Tonawanda, N. Y.
National Twist Drill & Tool Company, Detroit, Michigan
Natural History Museum, University of Colorado, Boulder, Colo.
Newport Naval Hospital, New Wing, Newport, R. I.
National Tea Company, Chicago, Ill.
New England Furniture Company, Minneapolis, Minn.
New Public Works Building, Peabody, Mass.
News Building, Grand Rapids, Mich.
News Building, Saginaw, Mich.
New York State Hospitals (10), State of New York
New York State Teachers Building, Albany, N. Y.
Niagara Permanent Savings & Loan, Niagara Falls, N. Y.
Oldsmobile Company, Lansing, Mich.
Park Central Hotel, New York City, N. Y.
Park Lane Hotel, Denver, Colorado
Paxton Hotel Coffee Shop, Omaha, Nebr.
People's Store, Troy, New York
Pierre Marcel Co., Boston, Mass.
Pioneer Hotel, Amarillo, Texas
Progressive Aid Insurance Co., Philadelphia, Pa.
Public Library, St. Joseph, Mo.
Purdue University, Lafayette, Ind.
Pure Oil Company, Minneapolis, Minn.
Purity Bakeries, New York City, N. Y.
Quincy Electric Light Company, Quincy, Mass.
Remington-Rand, Inc., Various Cities
Riviera Restaurant, Buffalo, N. Y.
Rundel Memorial Library, Rochester, N. Y.
Russell Miller Company, Portland, Ore.
Sage-Allen Company, Hartford, Conn.
Salem Electric Light Company, Salem, Mass.
San Jose Armory, San Jose, Cal.
Schiff Shoe Company, Columbus, Ohio
Shadbolt & Boyd Company, Milwaukee, Wisc.
Shepard Stores, Boston, Mass.
Shepard Stores, Providence, R. I.
Silver Creek Hotel, Silver Creek, N. Y.
Silverkane Restaurant, Binghamton, N. Y.
Socony Vacuum Oil Company, New York City
Standard Oil Company of New York, Albany, New York
Franklin Simon Company, New York City, N. Y.
Smith Winchester Company, Jackson, Mich.
South Shore Towers, Chicago, Ill.
Southern Casket Company, San Antonio, Texas
Southern Pacific Railroad Company, San Francisco, Cal.
Sparks Theatres (8), Florida
St. Jerome Hospital, Batavia, N. Y.
Steiger's Store, Springfield, Mass.
Steuben Building, Chicago, Ill.
Swift Printing Company, St. Louis, Mo
Tacoma Hospital & Sanitarium, Greenville, Tenn.
Union Pacific Offices, Denver, Colorado
University of Minnesota, Minneapolis, Minn.
University Club, Pittsburgh, Pa.
University of Illinois, Urbana, Ill.
U. S. Army Post, Fort Niagara, N. Y.
U. S. National Bank, Vancouver, Wash.
Walper's Department Store, Chelsea, Mass.
Warren Apartments, Cheyenne, Wyoming
Wayne County Building, Detroit, Michigan
Washburn-Crosby Company, Buffalo, N. Y.
Warren Allen Carpet Company, Boston, Mass.
Western Tablet & Stationery Company, St. Joseph, Mo.
Western United Gas & Electric Co., Aurora and Murphysboro, Ill.
Worcester Electric Light Company, Worcester, Mass.
Yale University (Graduate College and Payne Whitney Gym),
  New Haven, Conn.
Yawman & Erbe Desk Company, Boston, Mass.
Y. M. C. A., Various Cities
N. Texas State Teachers College, Denton, Texas
Southwestern State Teachers College, San Marcus, Texas
Texas Technological School, Lubbock, Texas
Public Library, San Angelo, Texas
Arcadia Theatre, Dallas, Texas
Oklahoma A. & M College, Stillwater, Oklahoma
Anglo-California National Bank, San Francisco, California
Kohler & Chase, San Francisco, California
Talon Fastener, Inc., San Francisco, California
City Hall, Boston, Mass.
Boston Edison Company, Woburn Store, Woburn, Mass.
Kidder-Peabody Company, Boston, Mass.
Hale Rubber Company, Quincy, Mass.
New England T. & T. Company, Providence, R. I.
Waverly Coop. Bank, Waverly, Mass.
Masonic Hall, Arlington, Mass.
Reading Municipal Light Company, Reading, Mass.
Public Library, Framingham, Mass.
Town Hall, Framingham, Mass.
Gold Seal Shoe Company, Boston, Mass.
Prudential Insurance Company, Boston, Mass.
Metropolitan Life Insurance Company, Torrington, Conn.
Clearweave Hosiery Stores (20) Stores
Russia Cement Company, Gloucester, Mass.
Standard Oil Company, New York City
N. J. Zinc Company, New York City
Abraham & Straus, Brooklyn, New York
American Business Credit Corporation, New York City
Towers Hotel, Brooklyn, N. Y.
New York State Hospital of Mental Diseases, Central Islip, N. Y.
Bloomfield High School, Bloomfield, New Jersey
Paterson High School, Paterson, New Jersey
Public Library, Locust Valley, New York
Cathedral College, New York City
Hotel Tudor, New York City
General Foods, Brooklyn, New York
Shell Union Oil Corporation, Jackson Heights, New York
Hotel Gotham, New York City
Loft, Inc. (5 stores in New York City)
Personal Finance Company, Various Branches
New York World's Fair, Draftsmen's Headquarters
Hotel Fairmount, Jersey City, N. J.

*Complete or partial installations.

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